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THE JOURNAL OF HIGHER EDUCATION is published to serve as the professional journal of the sixty-seven thousand instructors and administrative officers in the colleges, universities, and professional schools of the United States. Among the associate editors there are representatives from every department of academic responsibility in higher education. With their assistance the editorial staff seeks ten times a year to bring to its constituency reports of the most significant investigations in the instructional, administrative, personnel, and curricular problems in all branches of higher education.

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The Journal of Higher Education APRIL, 1930 II

The Floundering Freshman

By GEORGE W. RIGHTMIRE

Furthering the Scheme of One University for the Orientation of the Freshman

THE educational statistician has been busy for the last decade surveying and appraising education on all its levels higher and lower—and from many points of view. He has shown that in state universities many students enter at the bottom but comparatively few go over the top. The great exodus is below the junior year, most of it is in the freshman year. This is due to several causes, some beyond university control: ill health, poverty, domestic conditions, wanderlust, chronic weariness, micawberism—for these the university can do little. But there are many defections not traceable to these causes, cases in which the university's obligation is perhaps insufficiently appreciated or inadequately met or perchance neglected. It is this area of responsibility, and a program for carrying it, that I wish to discuss briefly in this paper; what I shall say will apply primarily to a large diversified university, and I shall not stop to provide orientation or furnish atmosphere; fully enough of that has been done in many books and numerous periodicals in times still recent!

The college or the university upon a private foundation may select its students from the upper ranges only, and, in fact, such institutions are commonly doing so today. But the state university is supported by the public just as secondary schools of the state are, and quite generally the supporting public has deemed it wise to admit, to the state university, graduates coming from high schools of a certain grade. The ranking of such schools is likewise determined by a public agency, if not by statute, and so the whole matter is managed in some way by the public. Hence arises the problem of numbers and also of quality.

The teaching staff which has been provided for the Freshmen, especially, and to some extent for the Sophomores, has been expanded to meet the numbers. It has sometimes been augmented quickly in order to meet an emergency due to unexpected numbers, but has never been large

enough. This staff has normally included a considerable number of recent graduates, young persons, generally speaking, with slight experience in teaching, and so comparatively inexpensive. More consideration by the institutions might have been given to this selection if there had been more money, more time, and more teachers.

With classes which were too large, with many students failing, frequent parental complaints, and with inadequate facilities, university faculties became discouraged, to some extent hopeless, and finally somewhat callous. It became rather customary to say that a certain large percentage of the Freshmen must fail because of lack of preparation, or lack of brains, or both. The attitude, generally speaking, of the state university was that the Freshman must adapt himself to collegiate methods and subjects; there should be no mollycoddling! The large definition prevalent for that term helped university administrations to excuse some incompetence, some negligence, even some scholastic inhumanities. However, the natural obligation of the university gradually asserted itself, and the disappointment of many parents grew into a chorus. A genuine concern for all students became more evident in the departments, and the universities set up committees of ways and means for the improvement of first-year teaching and for a more considerate and intelligent endeavor to determine the native abilities of the Freshmen. Ways were devised to learn what they had accomplished in the high schools and whether they entertained worthy purposes in coming to the university. Self-appraisals by the universities aroused queries as to whether there were defects in the teaching accorded the students, and whether they had not loud-pedaled the consoling charge of weak high-school preparation. In short, if any or all of these charges should prove true, then what should be done about it?

UP to this point the picture has displayed a rather typical university situation which has grown increasingly acute since 1920. Institutions have recognized it, a variety of remedial procedures have been proposed, much has been said and written, and plans have been set operating which have been helpful and generally stimulating. But instead of proposing another plan, I desire to describe briefly a complex experiment, being carried forward at the Ohio State University, which is based upon prolonged study by members of the faculty, prompted by faculty concern, and supported by faculty determination, intelligence, and enthusiasm.

We have a "Freshman Week," and after three years are giving the results careful study and appraisement. There is the well-known intelligence test for all, with results carefully tabulated but their meanings not yet exclusively determined. Placement and aptitude tests are a part of the plan.

We also are trying to determine a class of manageable size, to enable the students and the teacher to come into close and frequent contact in the classroom and laboratory. The teacher should have some stimulus for the student in his manner, his approach, his attitude, and his proficiency in his subject; he should be especially interested in the individual student; and

small groups will help the teacher and students to meet on common ground.

There are, however, diverse ideas and practices about proper sizes of class sections. In some departments, it is suggested that the class discussion is better sustained and more stimulating if there is a large number of students, say forty to seventy-five, because in the larger number it is more likely that leaders of discussion will appear. The larger section also has somewhat the effect exercised upon a speaker by an audience, whereby it is thought the best abilities of the students who engage in the discussion will thus be drawn out and developed. Elsewhere it is suggested that the section should be very large, purely a lecture section, and recently interesting experiments, with control, have been carried on at the University of Minnesota. The results have been published and Professor Hudelson and others have reached the conclusion that, as far as the mastery of the subject ascertained by examination is concerned, the students in the larger lecure section get on just as well as those in the small intimate discussion section. At Minnesota, as I understand it, they are not making their conclusions any broader than that, and therefore, do not profess to have found any evidence upon which they make a comparative statement in other respects, and that leaves the situation open for further comment by those who are interested in experimenting with the small section.

There is much to be said for the section of twenty to twenty-five, meeting the teacher regularly in intimate, rather close-up, discussions of the questions involved in the day's assignments, a condition under which both teacher and student may exercise the maximum influence upon the other; in such sections the recitation or laboratory stands out as a developer of personality, of attitude, of methods of attack upon a subject, and possibly some other factors may be found in the situation besides that of achievement of a certain degree of knowledge. It is thought that the ability to make that knowledge a part of one's equipment and to apply it will be heightened, and, until greater and more convincing proofs have been made than are yet known about, the small section with a good teacher should have the preference in our educational organization. We are dealing with human materials and at this point the factor of expense cannot be the determining one; we are striving for the maximum development of individual capacities.

WE are endeavoring to select teachers for Freshmen with greater care and are becoming more willing to spend money in that area of the faculty; a counter-movement is met here in most university faculties in the theory which has been well practiced, that the university teacher must aim at the higher courses and the graduate work and research field; perhaps, indeed, he stultifies himself if he expresses a willingness to remain in the teaching field with the lower classes of university students. This thought about the preferable aim of the university teacher is well defined and is vigorously asserted and has been exercising a tremendous effect upon the quality of the teacher and the teaching in the freshman area.

It is believed that this has been carried to a great extreme, and that the ideal member of a university faculty—man or woman—will find great pleasure in working on all these levels. As a research worker he will come back to his teaching with a renewed interest and stimulating outlook, an enthusiasm for arousing a high degree of intellectual curiosity in the students. These experiences are continually developing his knowledge of the mental capacity and attitude of all grades of students and giving him a connected view of students' progress and the advancing ability to attack a subject which will aid him in the classroom, in the laboratory, and in the organization of his materials derived from research for presentation to the class group or in published form. We must not get away from the idea that, primarily, the university is a teaching institution, and some of the individual professors in this country who are most able in research are likewise among our ablest teachers. There is nothing contradictory in these abilities, but, whether the university teacher is capable in research or not, he should indispensably be a good teacher. The number of high-class research workers, non-teachers, will always be small in comparison with the entire number of persons in the university who are relied upon for the teaching. Our duty at this point, therefore, is to find the promising teacher and put him into service, giving him opportunities for upper class, graduate, and research work, but insisting upon a developing ability to deal with students.

Not only must the university do all these things, but it must find a way to give careful supervision and stimulus to the younger teachers. Accordingly, in departments enrolling considerable numbers of students at Ohio State University, the teachers in fundamental courses are placed under the direction of a single person called the supervisor; he has a large voice in the selection of these teachers and is depended upon to organize the study material and distribute the subject-matter agreeably through the time devoted to the course. Therefore, meetings of these teachers are frequently held to make an advance survey of the subject-matter to be taught and to distribute it into "doses." The supervisor will discuss with his group the methods of presenting different topics, and he will encourage them to propose methods and try them out. The teachers then proceed with the classroom and laboratory work, and the supervisor is a frequent visitor at these exercises. A skillful and wise supervisor will find many ways in which to compliment one of his teachers, to criticize his method, or to question his result, all of which should not go on in a destructive fashion but with the purpose of stimulating the teacher to improve. The most capable teachers available have been chosen as supervisors, and they are getting results.

It will be remembered that at Ohio State we have ten colleges; these departmental supervisors from the various colleges go into conferences on the same basis as if they were members of the same college, and they work out principles and procedures which will make freshman teaching an alluring field. Solicitude for the educational welfare of the student as a university

function could not be more emphatically manifested.

IN five of the large colleges of the University junior deans have been appointed to work with the freshmen students, the groups varying with the college from two hundred to eight hundred persons. For a year and a half these deans have been meeting in a council periodically, discussing methods, situations and policies, and comparing experiences. They are vitally interested in Freshman Week, in the testing for aptitude and intelligence, in the question of proper section size, in the selection of freshmen teachers, in the supervision of the freshmen courses, and in the high schools from which the Freshmen come. Particularly, each junior dean confers with each Freshman in his college, tries to become acquainted with him, to give him sympathetic hearings and counsel, to discuss with him his scholastic difficulties, and advise him about appropriate methods and procedures. If possible the junior dean learns something about his collateral activities and his life as a student out of the classroom and the laboratory and, in general, becomes acquainted with him to such extent that the student will feel free to come to him again for friendly counsel. The junior dean will find this an excellent opportunity to impress the Freshman with the truth that all education is largely self-education, and will counsel him in taking advantage of the offerings of the University to that end.

These conferences with students connote also numerous conferences with parents. Through the offices of the junior dean the parent may become well apprised of the University's great interest in the beginning students, and its method for carrying on their work in the most profitable and progressive manner. They may realize that, although the institution has thousands of students, yet it has a heart and a soul and is endeavoring to come into the closest personal relations with each student. In this way, also, the parents are stimulated to take a more constructive interest in the affairs of their children while at the University, and although they may not understand the various subjects being studied, they may show a helpful interest by keeping in touch with both the student and the junior dean. This is further made possible by sending to each first-year student and his parents a report of progress in the middle of the first quarter and a term report at the end of each quarter. The junior deans also carry on a large correspondence to enlighten parents and enlist their interest.

These junior deans are coming into close contact with the high schools of the state by personal visits or through especially prepared bulletins setting forth, for the information and guidance of high-school principals and students, the conditions of university study and the qualities which are required in order to make progress therein. These stimulate the high schools to a closer study of their pupils so that they may give them more competent guidance as to preparation for a university career, or wisely advise them as to whether they should go to the university at all. In these days, with a legislative enactment permitting admission of all graduates of first-grade high schools to the state uni-

versity, insufficient attention and guidance are given to students in the high schools to enable them to determine whether they should go to the university or not. Some go who cannot make progress, and others do not go who ostensibly could make progress. The high school has a function and a duty in this whole matter of making its pupils wise about university education and their own aptitude for it, and the university must sympathetically understand the secondary schools and should help.

After some experience in university study a student may find that he is not getting ahead in the particular college in which he has started and shows evidences that he could succeed better in some other college; for instance, he has started in the College of Engineering but perhaps should be in the College of Agriculture; this is an extremely important question which the student now faces, and he should have all the help possible in answering it. The junior dean summons to his assistance all the personnel agencies maintained in the University, and they analyze the student as a particular individual to determine his concrete needs and transfer him, if that will help him to a fuller realization of his capacities. The only purpose of a university is to serve the student; he is at the focus and is its sole *raison d'etre.* Educational guidance is a newly conceived responsibility, which in our complex civilization calls for rapid development.

In co-operation with the junior deans the freshman teachers are also undertaking interviews with the students in their classes. The teacher aims to have a "friendly interview" of fifteen minutes or more with each student, privately, and this will usually lead to further conferences about the educational progress, the social experiences, and any collateral interest of the student concerning which the teacher may be of some aid or comfort. In any case, it will lead to acquaintance and a mutual understanding which breaks down reserve and unnecessary formality and quickens appreciation and sympathy. Who will say that this humanizing experience will not be mutually stimulating, and that it is not needed? Much testimony as to its efficacy is forthcoming, and we are fast learning the technique. We are stimulating the ordinary student; we are setting free the brilliant student, by thus individualizing them!

IN recent years possibly no subject in university and college circles has deserved more serious study and discussion than that of the quality of the teaching and the supply of high quality personnel. As the thinking has progressed it has become astonishingly apparent that a great part of the training given to prospective college and university teachers has been that encountered in going forward to the Ph.D. degree. Everybody knows that, generally speaking, this experience is not one that would round out one's ability to teach or even make it clear to him that he had any such ability; the whole purpose of such training is, ordinarily, to reach the dissertation and the crowning degree. This degree has been set up in many places as prerequisite to university and college teaching, but ability to teach has not been put into the problem. Accordingly, there has been much per-

formance by doctors, but a surprising lack of good teaching ability. Now, inasmuch as seventy, or even a higher, percentage of candidates for the Ph.D. degree expect to teach, why should not a part of their time be devoted to a study of principles of education and educational psychology? They might even actually get some experience in teaching before the degree is achieved. This idea makes headway slowly, and meanwhile the universities and colleges must find teachers. The result is that in many areas there is some slackening of the requirement for the degree. The student may give other evidences of his great interest in certain fields of learning and in addition should be required to give evidences of his teaching ability and his interest in the business of teaching and in youth. Accordingly, the universities are carrying on much experimenting in this matter of preparation of teachers and are endeavoring to give the younger teachers supervision and training and inducement to perfect their teaching art, while teaching and such efforts are working well.

IN this democracy we must start with the principle that every person should have the opportunity of developing his faculties or abilities to the utmost, and this opportunity should be presented by the state or the public as a part of the obligation of society. It was formerly thought society owed to its children only elementary education, but long since it progressed into the field of secondary education, and for many years now has been impressed with the obligation to provide the opportunities for a higher education also. This being fundamental, it follows readily that the means and facilities for education and for teacher training must be the best possible and must be selected with the greatest care and discrimination, and there must be a complete opportunity of obtaining experience under stimulating conditions. Our colleges of education and our graduate schools must make a stronger contribution at this point.

Further, the youth upon coming to the university must find such facilities, such teaching, such sympathetic understanding of his life and its social, educational, and moral requirements that his opportunities for development may be of the fullest kind. So complete must all these agencies of the state be and so well must they function, that if a student fails to go on satisfactorily in his educational work, it will be his fault and not in any degree chargeable to the institution because of its negligence, or ignorance, or defective methods. Only with this conception of the university's opportunities and obligations toward the student can we make progress, and only under this vision can the university accomplish its proper purpose in the life of the people of the state, and make its reasonable contribution to the development and the preservation of the social order.

The teacher always must be the prime mover in the institution, and we must cut a way through the entanglement due to many rules, frozen procedures, preconceived notions about the use of general principles, and complicated machinery of record-making, with all of which we are terribly beset today. This would, in considerable part, disappear from the scene if we

only had the ability to select our teachers wisely, would create facilities for giving them further sympathetic supervision and training in service, and finally would let the good teacher go practically his own way after we have discovered that he is a good teacher. Education in groups tends to become mechanistic, and the heroic struggle now going on in our institutions of higher learning to escape the direful results of this tendency is the most commendable of the time. We are learning how to deal with large numbers of students on the individual basis through the multitude of experiments being continuously carried forward, although none of us has found the complete solution of our higher-educational problems. Since, however, we are all willing to study the experiments of others and to put their suggestions into practice as far as it seems possible, the most hopeful era for the college and university student appears to be just coming into view.

An Adventure in Education[1]

By RALPH W. GERARD

No lectures, no textbooks, no laboratory assignments, but still the students worked hard

FIFTY years ago Louis Agassiz said, "Question Nature, not books," and called into being the modern laboratory courses of science. Now youth learns chemistry with the Bunsen burner and biology with the scalpel, and scientists are haughty to philosophers.

The method of teaching by doing is certainly an improvement over that by exposition, but how grotesquely has the meaning of Agassiz's dictum been warped! For example, a class is learning how to test for arsenic. Before commencing the experiments the students are expected to have read, and often have, about the various reactions of this substance. In the laboratory they slavishly follow careful directions for proceeding. "Take 10 cc. of arsenic trichloride solution; add 10 cc. of concentrated hydrochloric acid, and warm to 70° C. Pass in hydrogen sulphide gas for 10 minutes. Observe the formation of a yellow precipitate of arsenic sulphide." Miss Y obtains no yellow precipitate; she used a dilute instead of a concentrated acid, but does not know this. Nature, as interrogated by Miss Y, says that arsenic does not have an insoluble yellow sulphide; the book says it does. And what does Miss Y say? "Oh, there must have been something wrong with the experiment." Miss Y would probably not remember arsenic sulphide very long even if her experiment had succeeded, but she will never forget that iron sulphide is black, for during the arsenic experiment she put her head into the hydrogen sulphide gas and when she withdrew it her artistically rouged cheeks and lips had become quite black. That was a real discovery.

So common is this experience that students regularly distrust their own observations and experiments, and when they pass on and perhaps become instructors, the state of mind persists. A friend teaching at Cambridge University told me of a particular experiment, a test of the action of some drug, that had been demonstrated to every class of medical students for a quarter of a century. For years he, as his predecessors, had failed in test experiments to obtain the expected effect and had always put across the actual demonstration by silently adding a different drug that did produce the results. Finally, he became sufficiently exasperated to study seriously the action of this drug, and proved that it had no such effect. The often "demonstrated" test was an "error that had crept into the literature of the subject," but the books had overpowered the observations of a generation of university students.

[1] Reprinted from the *University of Chicago Magazine*, XXII (1930), pp. 143-46.

The actual observation of certain striking phenomena is an invaluable experience. No description can convey the reality of an aurora borealis. The flashes of single disrupted atoms seen in a spinthariscope give a tangibility to atomic theory never to be had from discourse. The movements of the heart seen with X-rays are unforgettable. Ammonia must be sniffed and quinine tasted for full appreciation. Such laboratory adventures are striking and enduring and can stand by themselves with no understanding or explanations.

The great majority of the student's time in the laboratory, however, is spent in a very different manner. He repeats in varying combinations procedures that he has been through many times, and obtains results with which he has been made familiar. Mixing two solutions in a test tube and observing a white precipitate becomes tiresome after the first hundred times.

A further evil has crept into laboratory teaching and teaching in general, which is perhaps a reverberation from the present century lapping about our island universities. The period is filled to overflow with things to be done. Dozens of separate, often unrelated, experiments are packed into one afternoon period so that the mere manual execution of them requires some dispatch. Active thought about them, even if encouraged, is then pretty much out of the question, and the actual doing is degraded to little more than drudgery. As an aid to teaching, such laboratory work is yielding meager returns on the time and capital invested in it.

I have painted, perhaps, an extreme picture of laboratory teaching today, but certain valid conclusions, I believe, remain. The spontaneous interest of normal beings is stamped out, almost methodically, by having everything labelled and docketed beforehand. The student knows what to expect. If it happens, what of it? He knew it would, and there is no time to think about it now. If it does not, what of it? It should have; something must have been wrong, but there is no time to do it over. In truth we teach our students to question Nature, not books —to question what she tells us.

CRITICISM of our "higher education" has become such a lay and professional pastime, and is so familiar, that I may have been merely beating a dead man. The laboratory phase of the problem, however, has been little discussed by the leading experimentors on education. McConn, in his *College or Kindergarten?* discusses the subject on one page. Granted that students should be helped to teach themselves rather than be inflated to grasp concepts rather than learn facts; should be taught a continuum, not a *potpourri;* intensively, not fitfully. Is the laboratory to be utilized in this program? How?

Surely in the sciences the laboratory is the key to the whole situation. Even in the humanities an analogous type of activity has proved most effective. The students in Meiklejohn's Experimental College vivified their studies of Greek civilization by making Greek properties, giving Greek plays, and in some ways living Greek lives. The laboratory must be the student's main source of knowledge if he is to evolve it himself. He must make his own

discoveries, test his own theories, experience for himself the power and drudgery, the striking successes and the constant failures of experimental investigation. There he can give the much needed motor expression to accumulating sensations and ideas, rather than bottling them up, can know glorious and petty science as a devotee rather than as a spectator. To learn a subject from within is to live it; to live science is to do research—in a laboratory. By research I mean the positing of hypotheses and their experimental testing; and long established facts and experiments may offer as genuine matter for research to one who does not know them as to the person who first produced them.

This sounds very idyllic, but how are we going to achieve it? After all, science students must learn a modicum of the accumulated facts and techniques of the subject. It may be interesting to tell something of a course in physiology given during the last year based on this point of view.

THERE has been given for many years at the University of Chicago a year's course in physiology, listed in the junior colleges, but attended by a heterogeneous group of students. This year two dozen students —Freshmen, premedics, a graduate student in psychology, art students, drifters, well distributed in age and sex—registered as usual for the course. At the opening meeting I suggested the following program to them, and they agreed after a hot discussion to try it as an experiment.

First, no lectures: the three hours a week scheduled for lectures were to be devoted to discussion by the class—I being merely a rudder. Short formal talks were to be given by the students at times. Second, no textbook and no reading assignments: questions raised and interests stimulated in the discussion were to be followed up as desired with books and original articles in the library and in the laboratory. Incidentally, during the first week of the course the medical librarian gave the class an hour's talk and demonstration on the use of the library. Third, no assigned experiments: during the four hours a week alloted for these, the instructor and the assistant were to be in the laboratory and the special supply room open, but the laboratory itself was to be kept open at all times with the students free to work. Students would presumably test for themselves ideas and statements advanced during discussions, but the only conditions placed were that the project must be discussed with the instructor before it was begun, to avoid dangerous or destructive experiments and insure the presence of needed equipment, and must be carried to successful conclusion, in the sense of eliminating errors and uncertainties before being dropped. Fourth, no formal attendance taken nor examinations given: achievements equivalent to the university requirements were to be expected.

We started the discussion with the assumption that no one knew anything about biology. I asked what life is, and within the week the discussion led two students to find out that a frog's heart could beat for hours when cut from the body. Most students had assorted bits of information which at first they proudly contributed. Later they became more cautious since their

fellows were quick to pick flaws or demand evidence. Some periods I said no word for the entire hour. From the arguments came theories and plans of experiments to test them. Within three weeks all were busy on research problems, alone or in small groups. Some of these occupied the entire quarter, others were quickly completed.

Of course there were troubles. One or two students tried to be autocrats of the classroom and had to be restrained. One well-meaning chap just could not be prodded into developing something of his own in the laboratory and required constant nursing. A girl was frankly antagonistic to the whole scheme from the start and would not co-operate. It was difficult to supply the variety of equipment needed and to keep the building open evenings and Sundays. All the students found it difficult at first to do their own planning, and my time was eaten into for a month most unmercifully. Much of the students' time was lost through inexperience, at least the students did not hear or do so much as in the usual course. They certainly acquired, even temporarily, fewer facts.

HOW shall one judge the results? The group was absolutely unselected and might be compared with previous classes. The students could compare their reactions to this method and to regular classes. Their future behavior might be observed. But what are the critical tests to be applied? Did the mere novelty of a new experiment give an added advantage to the course? Unquestionably it has been the most interesting and, I believe, interested class I have taught. Far more than the one-fourth of "real students" allowed by McConn took an active part in the discussions, presented data gleaned from original articles, in German and French, too, and asked me for evidence if I made categorical statements. For the first time in ten years of teaching I have heard an "authoritative" statement met by a student with the withering retort that his experiments showed it was wrong.

After one month the students voted nearly unanimously to continue the course as it was going rather than to return to the usual method as I offered to do. A number of new students asked to be admitted to the second-quarter class. In a questionnaire filled out, I think honestly, since very frank criticisms were made at the end of the first quarter, the average report was that twice as much outside time had been spent on this work as on the other courses. The opinion was also expressed that the members of the class had learned few facts, but each had acquired a real appreciation of vital processes and a new idea of science. Many felt that the most valuable thing got from the course was the training in working on their own responsibility.

In the laboratory they began with simple experiments and worked to more difficult ones. At first many had never touched a frog, and few had seen kymographs or muscle levers. Before finishing, several were doing experiments done in graduate courses or not attempted by students. Several took up phases of problems that have never been worked out, and at least one—a Freshman at college, from a small-town high school, by the way—did research of such high caliber that

it will be published in a physiological journal. Perhaps even more significant were the experiences of those students who had trouble with their experiments and worked through them. One did an experiment performed regularly by the medics, but never properly. After a dozen trials, each taking an afternoon, he demonstrated it perfectly. Probably the month spent on that one undertaking taught him more than could any number of laboratory manuals. The laboratory was occupied at all hours; mysterious piles of apparatus rose and dwindled, enthusiasm and discouragement were there but not boredom. I think they learned something real about physiology and scientific method, and I think they enjoyed it; certainly I did.

The Training of Ph.D.'s

By EDGAR DALE

A Summary of the Teaching Experience and General Training of the Doctoral Students, at Ohio State University

THE inadequacy of the training which the doctor of philosophy receives to fit him for college teaching is a problem which has long agitated academic circles. The universal interest in this problem and the dearth of factual information concerning it led the Association of American Colleges in January, 1929, to request from Graduate Schools of the American Association of Universities figures showing the proportion of Ph.D. graduates who were engaged in college teaching and the proportion of doctoral candidates who planned to engage in teaching. Inquiry was also made regarding the facilities possessed and utilized for training these candidates in techniques of college teaching, and the cultural background of the candidates.

The results obtained from the study of these problems at Ohio State University throw considerable light on this problem. For example, of the 201 students upon whom Ph.D. degrees had been conferred up to January, 1927, 58 per cent were engaged in teaching in colleges, universities, and normal schools. Thirty-eight per cent were in research positions in government and industrial laboratories. Of the remaining 4 per cent, one was in business, one was preaching, the positions of three were unknown, two were women who had married since receiving the degree, and one was deceased. In order to determine whether or not the present trend is toward or away from teaching, an analysis was made of the present occupations of the 63 doctors of philosophy who received their degrees between the dates of September 1, 1928 and September 1, 1929. Of this group, 65 per cent were actually engaged in college teaching, and if we change our designation from college teaching to educational work, the percentage is increased to approximately 70. Apparently, there is a greater tendency, now than in the past, for the doctoral graduates at Ohio State University to go into teaching.

Comparisons with other institutions are interesting. Dean Chase, of Harvard, reports that, of the 574 doctors from that institution, 419, or 73 per cent, were engaged in college teaching.[1] At Cornell, 80 per cent of the 290 graduates who had received Ph.D.'s were in college or university teaching or research.[2] Of the 43 persons who took similar degrees at the University of Nebraska during the last ten years, 28, or 65 per cent, are now engaged in university teaching.[3] Sixty-four of the 75 persons who held

[1] Kelly, Robert L. "Educating the Educators," *Association of American Colleges Bulletin*, XV (1929), p. 352.

[2] *Ibid.*, p. 350.

[3] *Ibid.*, p. 366.

doctor's degrees granted by the University of North Carolina are engaged in college and university teaching.[4] Of the 2,055 Ph.D.'s graduated from the University of Chicago during a thirty-four year period 68 per cent are employed as teachers in colleges or universities.[5]

The second question asked by the Association was this: "What proportion of doctoral candidates plan to engage in college teaching?" Since this question is now regularly included on the personnel blank filled out by all candidates for higher degrees at Ohio State University, this information can be easily secured each year. Of the 217 men who are studying for the doctorate and are in residence this year, at least 71 per cent plan to teach, and of the 55 women who are studying for the doctorate, at least 75 per cent have similar intentions.

It is possible to compare these figures with those recently secured from the graduate students at Yale. Of the 612 candidates enrolled at present for all the degrees offered by the Graduate School, 395, or approximately 65 per cent propose to teach.[6]

The evidence, both from the occupations now engaged in by the graduates holding the Doctor's degree and from the statements of the intentions of doctoral candidates regarding teaching, indicates unequivocally that from 60 to 80 per cent of the Ph.D.'s of the graduate schools in this country will engage in college teaching.

The substance of the third question asked by the Association was this: "What facilities are possessed and utilized for training Ph.D. candidates in the techniques of college teaching?" The first step that we took in securing an answer to this problem was to send a questionnaire to our doctoral candidates, asking them the number of years of teaching experience which they had had and the type of school in which the experience was secured. Two hundred fifty-four replies were received to the 325 questionnaires.

The following information was gained from these questionnaires. In the first place, 90 per cent of the doctoral candidates now enrolled in this institution have had experience in teaching. The median amount of experience is approximately three years. The interesting details are summarized as follows:

Experience	Per Cent
No experience	10
One year	10
Two years	17
Three years	16
Four years	14
Five years	7
Six years	3
Seven years	5
Eight years	5
Nine years	2
Ten years	2
More than ten years	9

Thus 10 per cent of the 254 doctoral students now enrolled at Ohio State University who replied to the questionnaire have had no experience in teaching. The experience of the 90 per cent had been secured in five types of institutions:

Types of Schools	Per Cent
One-room rural school	2
Elementary	3
High school	32
College	16
University	37

Where the experience of the doctoral students was divided among different

[4] *Ibid.*, p. 367.

[5] Wilson, M. O. "What Chicago Doctors of Philosophy Are Doing," *School and Society*, XXX (1929), pp. 817-18.

[6] Kelly, *op. cit.*, p. 379.

types of schools, it was classified under the type of institution in which they had had the most experience. Comparable figures from other institutions or for other years in this institution are not at hand, but a median of three years of teaching experience seems, in the opinion of the writer, to be surprisingly high.

A study was also made of the professional training in education which had been secured by 50 of the last 78 Ph.D.'s graduated. Thirty-two, or more than half of them, had had courses in education, and of this number, 26 took their degrees in subjects other than education. That is to say, 52 per cent of the 50 doctors examined who took their degrees in fields other than education had had some courses in that field, or in other words, only 18 of the 50, or 36 per cent, had had no course in education, either undergraduate or graduate.

WE are now faced with two interesting types of facts. In the first place, 90 per cent of our doctoral students have had experience in teaching, and we can also assume that about two-thirds of the graduates who received their doctor's degrees within the past two or three years have had undergraduate courses in education. What inferences can we logically draw from these facts regarding the training needed by doctoral candidates in teaching?

These data should not be interpreted as indicating that most doctoral candidates need no training in teaching. For example, most of them had their courses in education about ten years ago, and there have been many developments in the field since that time. In the second place, the courses in education dealt either with elementary- or secondary-school teaching, since there are few schools of education which give training for college teaching.

Somewhat similar objections could be raised in regard to the teaching experience of these doctoral candidates. Since experience in teaching does not mean efficiency in teaching, and since courses in teaching for the elementary and secondary schools are only indirectly applicable to college teaching, it is apparent that attention should be given to these questions in considering the improvement of college teaching. It is clear, however, that teaching experience may be helpful in acquainting the students with many of the typical learning difficulties encountered, and this fact, coupled with the maturity of doctoral candidates, may make the problem of assisting them in the development of satisfactory teaching techniques more simple than it would otherwise be.

The scheme of the supervisory plan in operation at Ohio State University in freshman courses lends itself admirably to the remedying of deficiencies with which young instructors may be afflicted. The plan here is to have the large beginning courses taught by instructors under the direction of a supervisor. Consequently, those doctoral candidates who teach beginning courses do, as a matter of course, secure supervision and training in college teaching. However, of the 324 doctoral students, only 40 are engaged in the teaching of these beginning courses.

In the communication which was received from the Association of

American Colleges a further recommendation was made which we here quote:

> Since the college teacher should have a broad range of intellectual interest and experience, for the sake of both his students and colleagues, we suggest that no Graduate School admit to candidacy for the doctorate any student intending to engage in college teaching who has not a broad range of intellectual interest and experience. We do not consider it to be within the task of the Graduate School to give such interest and experience, which should in general be obtained before the beginning of graduate work; but we do believe that in the case of a student intending to engage in college teaching who has not such interest and experience the Graduate School should require that he obtain them—presumably, but not necessarily, through collegiate study for which no graduate credit should be given—before the student is admitted to candidacy for the doctorate.

If we assume that breadth of intellectual interest and experience is correlated in some degree with the courses that the student has taken in the great fields of human knowledge, the information which the writer secured by examining the records of 78 of our last graduating doctors throws considerable light on this problem. We found that only 14 of the 78 had taken courses in fields outside of, but related to, their major and minor subjects while pursuing their graduate work. Five of the 78 graduate students had taken credit courses entirely outside of their own field, and 10 students took such courses without credit. Examples of these non-credit courses were English for a student in normal psychology, mathematics for a student in soils, philosophy for a student majoring in history, and music for a student in educational psychology. The infrequency of election of courses outside of the field of specialization is doubtless due first to the fact that the course requirements for a Ph.D. degree are heavy, and second to the generally expressed sentiment of instructors of graduate courses that the responsibility for the liberal component of the education of the graduate student should rest almost entirely upon the undergraduate school.

WHAT does an examination of the undergraduate record of Ph.D.'s reveal as to their acquaintanceship with the broad fields of human knowledge? The range of contacts which 50 of the 78 doctors had made with eight major fields of learning were determined by analyzing their undergraduate records. All had acquaintance with at least two of them; the percentages having familiarity with three or more were:

	Per Cent
Three	2
Four	4
Five	12
Six	22
Seven	28
Eight	32

These eight fields were: biological science, physical science, social science, philosophy, psychology, mathematics, foreign languages, and English. The percentages of these students who had taken work in these subjects were:

Fields	Per Cent
English	100
Physical science	94
Social science	92
Foreign language	90
Biological science	84
Mathematics	74
Psychology	70
Philosophy	64

These data are significant in two respects. In the first place, doctors of

philosophy graduated from Ohio State University have on the whole had contact with a broad variety of courses. Eighty-two per cent of the doctors examined had made contacts with six or more of the areas. Only 6 per cent had no contacts with physical science, only 8 per cent had studied no social science in college. Moreover, some of the contacts which had not been made in college were probably made in the high school. Subjects in which the fewest contacts were made were psychology and philosophy. Quantitatively, therefore, the student has made sufficient contacts with the broad fields of human learning, in spite of the general feeling of the Association of American Colleges that these contacts have been qualitatively inadequate. It appears, however, that the responsibility clearly rests upon the undergraduate colleges to remedy any deficiencies of this sort. Since the facts presented in this study indicate unmistakably that the majority of our doctors of philosophy will go into college teaching, careful study should be made of the adequacy of their training for this task, and techniques should be set up to remedy the critical deficiencies. On this problem a committee of the graduate council is now busily engaged.

State Administration of Education

By M. M. CHAMBERS

Recent Reorganization of the Administrative Supervision of Higher Education in Oregon

DURING the 1929 session of the Oregon Legislature a statute providing for a sweeping reorganization and consolidation of the administrative authorities controlling higher education in the state was enacted. As a basis for comprehension of the new act, a picture of the situation as it existed previously is necessary. Oregon has a state university, known as the University of Oregon, at Eugene; a land-grant college, designated the Oregon State Agricultural College, at Corvallis; and three state normal schools, at Monmouth, Ashland, and La Grande. The University dates from 1872, and the College, as a land-grant institution, from 1868. From time to time there have been changes in the number, location, and designation of the state normal schools.

Prior to July 1, 1929, the university was governed by a board of regents of thirteen members, consisting of ten citizens of the state appointed by the governor with the advice and consent of the senate for terms of twelve years (overlapping) and the members of the state board of education ex officio. The state board of education consists of the governor, the secretary of state, and the superintendent of public instruction ex officio.[1]

The state agricultural college had its board of regents of thirteen members, composed of nine members appointed by the governor with confirmation by the senate for terms of nine years, the terms of three members expiring every third year, and the members of the state board of education and the master of the state grange ex officio.[2] The normal schools were under one board of regents, totaling nine members and made up of six members appointed by the governor and the senate for terms of six years, the term of one member expiring each year, and the members of the state board of education ex officio.[3]

Superimposed upon this structure was a fourth board, created in 1909, and denominated the board of higher curricula,[4] with full power to determine and define what courses or departments should not be duplicated in the university and in the state agricultural college. This board was composed of five members appointed by the governor with the advice and consent of the senate for terms of five years, the term of one member expiring each year. All members of the boards, faculties, or alumni of any of the higher-educational institutions were ineligible for service.

[1] Olson, Conrad Patrick. *Oregon Laws*. San Francisco: Bancroft-Whitney Company, 1920. Secs. 5409, 5410, and 4961.

[2] *Ibid.*, Sec. 5434.

[3] *Ibid.*, Sec. 5448.

[4] *Ibid.*, Secs. 5352, 5357, 5359.

Higher education in state institutions, then, was controlled by four separate administrative authorities. Ordinarily the total number of individuals serving on all the boards was thirty-four. All served without compensation except actual traveling expenses incurred in going to and from their respective meetings.

In common with other states where the state university and the state's land-grant college were founded and developed as independent institutions located apart from each other, Oregon has seen her two major institutions of higher learning thrust unavoidably into the position of competitors for fiscal support before the legislature, and rivals for the favor of the people of the state in general. Each has striven mightily to merit generous support, and each has a justifiable pride in its history and distinctive achievements, fostered by a large and commendably enthusiastic body of alumni. Certainly the existing rivalry has had its salutary effects upon the development of higher education in general, for Oregon's publicly supported facilities for higher instruction, considered as a whole, are unsurpassed by those of any other state of comparable population and developed wealth. However, there has been a growing feeling that the competing requests of the two institutions for appropriations in successive sessions of the legislature, necessarily backed by direct transmittal of information and appeals by representatives of each, means too close a marriage of education and politics to be countenanced. The system as described has come to be regarded in many quarters as an antiquated and clumsy piece of machinery for a state to use in the exercise of its function of higher education. This feeling, in conjunction with other factors, led to the passage of the reorganization act, which abolishes all of the just-mentioned boards as of July 1, 1929, and creates a State Department of Higher Education, headed by one board, the State Board of Higher Education, which succeeds to all the powers and duties of the old.

THE new board consists of nine citizens of the state, nominated by the governor and confirmed by the senate, for terms ranging from one year to nine years by regular gradations, all regular appointments hereafter to be made for a full term of nine years. It is directed to meet regularly every three months, at such time and place as may be designated by its president, who is to be elected by the board from among its own members to serve for one fiscal year. Special meetings may be called at any time by the president or by the secretary upon the written request of any five members. All members serve without pay other than ten dollars per diem and necessary traveling expenses while on actual duty as members of the board. All persons in any way connected with any of the state institutions of higher education are disqualified for membership, and not more than one alumnus of the university, one of the college, and one from the normal schools collectively, may be members of the board at any one time.

In addition to the overlapping long terms, the act contains provisions regulating the removal of members which are obviously designed to prevent the

board from ever falling under the domination of any one governor. The governor may remove any member at any time for cause,[5] after notice and public hearing, except that not more than three members shall be removed within a period of four years, unless it be for corrupt conduct in office. The senate's check on the governor's appointments is made close and continuous by the provision that the senate shall elect a committee on executive appointments, of six members, a vote of four of whom shall be required to confirm appointments to the board which may be made during the interim between legislative sessions. Appointments so made and confirmed are further subject to the approval of two-thirds of the senate when that body is next convened thereafter.

The powers and duties[6] of the four old boards, to which the new board succeeds, although somewhat different *inter se*, do not as a whole vary materially from the functions commonly assigned to such boards in the various states. An enumeration of them in the aggregate would be too long for repetition here. It is the new powers conferred upon the department of higher education which are most significant.

Legislative appropriations for each of the institutions for the biennium ending December 31, 1930, had already been made before the passage of the reorganization act and are to remain unchanged, and all the work of the institutions thereby provided for is to proceed undisturbed during the ensuing two years. Thenceforth the new board is expressly authorized and required to prepare and submit to the governor biennially, at such times as he may direct, a report containing the proposed budget for the succeeding biennium covering in detail the purposes for which all expenditures for higher education are sought to be made. In the preparation of this budget the board shall have authority to allocate to the respective institutions all funds then available and all funds which under laws then existing shall become available during the succeeding biennium from all sources, as far as they can be ascertained. This relieves the legislature of the task of balancing the merits of the requests for funds made in the budgets of the separate institutions, and also confers upon the board the power to determine the allocation of the funds derived from the state levy of 2.25 mills for higher education, which has hitherto been done by the legislature itself.[7] The board is also directed to encourage gifts to the institutions by faithfully devoting donated funds to the institutions for which they may be intended, subject to the terms of the gift, if any, and by other means.

The board is also commanded to prescribe for all the state-supported higher-educational institutions a standardized system of accounts and records. This is unquestionably a provision to be commended by students of public finance.

ONE noteworthy feature of the new act is the section which commands that the board shall con-

[5] The act does not specify what shall constitute sufficient cause.

[6] Olson, *op. cit.*, and supplementary volumes to 1929, Secs. 5416, 5433, 5437, 5449, 5458, 5357, 5358.

[7] State of Oregon. *General Laws*. 1920, special session. Chap. 36, Sec. 1.

duct a comprehensive survey of Oregon's state-supported facilities for higher learning. This section stipulates that

> As soon as practicable after the passage of this act the board shall secure the assistance of some nationally recognized, impartial authority or authorities in making a complete survey covering the present condition and future needs of all branches of state-supported higher education and scientific research in Oregon. This survey shall include a study of the experience of other states in dealing with similar higher educational problems to those confronting this state. The results of this survey shall be embodied in a report, on the basis of which the board shall proceed to draft a program of higher educational development adapted to the needs of the state, taking into consideration its population, resources, and tax-paying ability.[8]

The board is specifically directed to inaugurate its new program July 1, 1931. It is expressly given full authority to reorganize the work of each and all of the institutions under its control so as to eliminate unnecessary duplication of equipment, courses, departments, schools, summer schools, extension activities, offices, laboratories, and publications. This latter provision is a recapitulation of the powers formerly vested in the board of higher curricula, now abolished.

It is provided that the new board shall employ and fix the salary of a full-time executive secretary, who shall be a person qualified by educational training, ability, and experience to keep the members fully informed at all times regarding the progress of the work of the department. The executive secretary is to reside at the state capital and have his office in the statehouse. He is to be given access at all times to the books, records, property, business offices, classrooms, libraries, and other equipment of all institutions, departments, and offices under the jurisdiction of the board. It appears that his position as liaison officer between the lay governing board and the expert heads of the different institutions will undoubtedly be a very important key position in the new scheme of higher-educational administration, carrying large possibilities for good or ill, depending upon the character and competency of the incumbent.

THE act expressly provides that all advertising and publicity on behalf of all branches of state-supported higher education in Oregon shall emanate from and bear the name of the department of higher education and shall be conducted in such a way as to present to the citizens of the state and prospective students a fair and impartial view of the higher-educational facilities provided by the state, and the prospects for useful employment in the various fields for which those facilities afford preparation. It further prescribes that all relationships and negotiations between the state legislature and the institutions of higher education shall be carried on through the department of higher education, and all officials representing any of the separate institutions are forbidden to appear before the legislature or any of its committees except upon the written authority of the board.

The establishment of a central clearing-house for institutional pub-

[8] State of Oregon. *General Laws.* Salem, Oregon: Printing Department, 1929. Senate Bill 192. p. 258.

licity seems to promise the possibility of increased economy in carrying information of the work of their higher schools to the people of the state, and of a more symmetrical and orderly service of guidance to prospective students than has hitherto been achieved. The attempt to restrict the ear of the legislature to pleas coming from the central administrative authority for higher education is in line with the broad, current movements toward the consolidation of scattered administrative agencies and the reform of budgetary procedure in state administration. The present act was supported with great vigor and effectiveness by the redoubtable Dr. Hector McPherson, formerly a professor of economics in the state agricultural college and now a member of the lower house of the state legislature, who has consistently advocated a general reorganization and consolidation of the entire state administration in Oregon for a number of years, as yet without complete success. Since the passage of the act some of its opponents have brought a test case before the supreme court in which they sought to prove it to be unconstitutional on various grounds, all of which appeared trivial to many observers. The court has upheld its constitutionality, and there now appears to be no immediate serious obstacle to the execution of the program contemplated by the legislature.

The personnel of the new board of higher education, as appointed by the late Governor I. L. Patterson, has been the subject of favorable comment generally in the state. Three bankers, an editor of a state-wide daily, an attorney, a mining engineer, a merchant, a timberman, and a cattleman make up a board as representative of the various interests to be served as any small body could well be. Three of these men were chosen from the membership of the three old boards of regents which the new body supersedes, one being chosen from each of the defunct boards. Thus the principle of a certain degree of continuity of policy is served. The board's choice of an executive secretary has not been made as this article is written, but it is probable that some specialist in higher education of experience and recognized skill will be placed in this position. The forthcoming survey of state-supported higher education in Oregon, and the resulting new program for the state, will be matters of interest to students of public administration and higher education everywhere.

Growth of Certain Junior Colleges

By JOSEPH V. HANNA

The Significance of Increases or Decreases in Enrollment Judged for Typical Groups

THAT every striving and worthy youth is entitled to a college education is held to be axiomatic in our democracy. Stimulated by social and educational influences which surround them, our young men and young women are matriculating in colleges and universities in ever increasing numbers. This cross section of young American life has been taxing facilities for higher training within recent years as they never have been taxed before. Problems arising out of this phenomenal growth constitute the most important challenge in the whole field of collegiate education. Since junior colleges are sharing this general increase in enrollment, the present discussion will deal with certain of its phases among the junior colleges.

The writer recently completed a study of student retention in thirty-five junior colleges. Twenty-eight of them submitted lists of entering students for three years—from 1923 to 1926. The enrollment of the freshman classes was taken as a basis for the study of growth, since the entering classes comprise all the regular two-year students matriculating for the first time. Repeaters, students who for various reasons failed to be promoted and were still classed as Freshmen, as well as students who entered with advanced standing were not included with the Freshmen who were matriculating for the first time. The findings of the study are considered under the following heads: the general growth among the colleges as a group; the relation of type of college, classified according to the sex of students enrolled, to geographical location, and to growth; and the relation between the size of the junior college and its increased enrollment during the period of investigation.

The total number of entering students for the respective years for all junior colleges collectively and for the colleges classified according to the characters just mentioned are given in Table I. When all the colleges are considered as a group, growth during the period from 1923 to 1926 was continuous; the combined 1924-25 entering classes show a gain of 11 per cent over those for 1923-24, and similarly the 1925-26 classes a gain of 20 per cent over those of 1924-25. The total gain of the last over the first group of entering classes is more than 33 per cent.

The junior colleges, grouped according to the various classifications, also show interesting variations with respect to growth. The twenty privately supported junior colleges show a growth of 35 per cent in entering Freshmen from 1923 to 1926, while

the six publicly supported junior colleges show a growth of 55 per cent for the same period (see Table I).

GROWTH among junior colleges, as would be supposed, varies largely extending from an actual loss of 38 per cent for one college to a 288 per cent gain for another. The median growth for the twenty-eight colleges is 33 per cent. Differences in growth among the several colleges are shown in Table II.

The largest increase for a single institution, 288 per cent, was made by a private junior college. All losses, also, were found within this group. In only one public junior college was the gain noticeably low. Examination of the two groups of colleges separately and collectively makes it plain that publicly supported junior colleges, according to the samples considered, in general excel by a considerable margin the privately supported junior colleges in the matter of growth over the period of years represented. It may be inferred that, since the public junior colleges are in general younger institutions than the private colleges, they would be expected to show more rapid growth. While this inference in a measure seems plausible, obviously, it is not sufficient to vitiate the comparison between growth of publicly and privately supported colleges.

Before generalizations with respect to growth in relation to further groupings are made, a few apparent differences indicated in the table but which in reality should not be interpreted at face value need to be considered. One of the three junior colleges enrolling

TABLE I

GROWTH AND DECLINE OF TWENTY-EIGHT JUNIOR COLLEGES FROM 1923 TO 1926

	Number of Colleges	Number of Entering Freshmen			Total Increase	Percentage Increase
		1923-24	1924-25	1925-26		
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Classified by Method of Support					
Privately supported	20	1,032	1,132	1,396	364	35
Publicly supported	6	421	536	652	231	54
State supported[a]	2	565	572	630	65	12
All types	28	2,018	2,240	2,678	660	33
	Classified by Sex of Students Enrolled					
Male students	3	111	151	195	84	76
Female students	6	279	265	304	25	9
Coeducational (not publicly supported)	13	1,207	1,288	1,527	320	27
Coeducational (publicly supported)	6	421	536	652	231	55
	Classified by Location					
Far West–Southwestern[b]	8	1,040	1,102	1,317	277	27
Middle Western	12	629	732	881	252	40
Southern[c]	7	333	391	470	137	41

[a] One of the two state junior colleges has more than five hundred entering Freshmen annually.
[b] One large junior college with very small growth brings down total for this group.
[c] One college in the East not included in this grouping.

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male students only and privately supported shows the greatest growth among the colleges (see No. 18, Table II). The extremely large increase for the group admitting only male students, 76 per cent, is due to this college. One junior college (see No. 1, Table II) classified among the privately supported coeducational junior colleges, and included in the Far West–Southwestern Group admits approximately five hundred Freshmen each year. This college has apparently approached the saturation point, for it shows relatively little growth from 1923 to 1926. Data from this one institution have the effect of lowering the percentage of growth for the privately supported coeducational group, as well as for the Far West–Southwestern Group, far out of proportion to the effect which one institution should have in the classification. For this reason, data from the two institutions here referred to do not enter into the group as represented by data presented in Figure 1.

TABLE II

RELATION OF SIZE TO GROWTH IN THESE JUNIOR COLLEGES

	Number of Freshmen	Percentage Increase
(1)	(2)	(3)
1	510	8
2	212	48
3	180	69
4	161	46
5	142	9
6	126	68
7	84	97
8	82	36
9	79	39
10	75	0
11	74	3
12	56	13
13	47	41
14	46	27
15	43	23
16	42	133
17	41	45
18	41	288
19	40	3
20	35	159
21	35	45
22	33	82
23	32	33
24	31	–32
25	29	–10
26	14	–38
27	14	–38
28	9	20

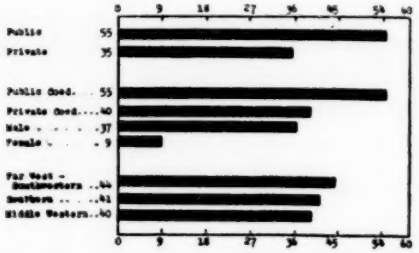

Figure 1. Percentage of growth of twenty-six junior colleges, variously classified from 1923 to 1926

AS we consider the institutions grouped according to the sex of the students enrolled, the coeducational junior colleges publicly supported rank first, the privately supported coeducational colleges second, and those limiting enrollment to either sex of students exclusively, third. The institutions enrolling women only show very little growth, as a group, for the years studied. Three of the institutions of this group show an actual loss in entering Freshmen for the last as compared with the first year. In so far as development from 1923 to 1926 constitutes a safe index of growth, it would seem that, in general, the coeducational junior colleges are destined to more constructive growth than institutions limiting enrollment to either sex exclusively.

Comparison of the junior colleges in the three geographical areas, the South, the Middle West, and the Far West–Southwest, reveals little difference in growth, for the institutions of each area increase approximately 40 per cent in enrollment from 1923 to 1926, the slight difference of approximately 4 per cent favoring the Far West–Southwestern Group (see Figure 1). The one college previously referred to (see No. 1, Table II), which has a relatively large enrollment, shows small growth, and represents a type of college found in neither of the two remaining geographical areas, was eliminated from the Far West–Southwestern Group in arriving at the present generalization. Certain variations among the colleges, however, are typical of the geographical areas. The colleges of the southern and middle-western areas show greater variability in growth, for two colleges in each of these areas show loss in the number of Freshmen from 1923 to 1926. No college in the Far West–Southwestern Group shows a loss for this period.

The relation between size of junior colleges and growth during the period of years is shown in Table II. Data from the colleges are presented in rank order, according to the size of the average entering freshman class for each institution. The average number of entering Freshmen is listed in Column 2 and the percentage of growth or loss from 1923 to 1926 for each college is given in Column 3. The general correlation between size of the college and growth during the period is about .3. That the general correlation hardly indicates certain significant tendencies between growth and size is observed through examining the percentages for the institutions separately. Of the junior colleges showing greatest growth (Numbers 18, 20, 16, 7, 22, 3, and 6), only one has an entering freshman class of below thirty-five. Included among the seven colleges standing lowest in growth (Numbers 26, 27, 24, 25, 10, 11, and 19), are, of course, the four institutions which show actual loss. Four of the colleges in this group occupy four of the five last ranks from the standpoint of size. It would seem clear that a junior college, except during its early years, which has less than thirty-five students in its entering class, is destined to relatively small growth.

CONSIDERATION of growth in connection with the power of the junior colleges to hold their students until graduation, the per cent of students requiring longer than two years for completing the course, and the percentage of graduates continuing their education at other institutions throw additional light on the status of growth itself. The percentage of the retention of students until graduation within the institutions in which they first matriculated, for the various groups of colleges, follows:

	Percentage of Students
Privately supported	42
Publicly supported	34
Enrolling women only	52
Enrolling men only	50
Coeducational junior colleges (excluding publicly and state supported)	36
Southern	47
Middle-Western	40
Far West–Southwestern (excluding one large junior college with small retention)	32

Differences among the junior colleges variously classified, with respect to

time required for graduation and percentage of graduates continuing at other colleges, are as decided as differences in retention until graduation.

Consideration of the factors just mentioned in relation to growth lead to a number of significant observations. The public junior colleges, standing low in retention, stand high in the percentage of students requiring longer than two years for graduation and in the percentage of graduates continuing at other institutions. At the same time, the public colleges show the most rapid growth of all the groups. The far-west–southwestern colleges, standing lowest in retention but highest in percentage of delayed graduations, at the same time show slightly larger growth than either of the two other geographical groups.

The junior colleges limiting enrollment to one of the sexes exclusively stand highest in retention. At the same time these colleges show a conspicuously small percentage of students requiring longer than two years for graduation, and they stand as the lowest group when measured by growth. Those colleges limiting enrollment to women exclusively stand relatively low in percentage of graduates continuing at other institutions.

It follows that within the junior colleges grouped according to the various classifications greater growth and more severe elimination go on apace. At the same time highest retention seems to accompany slowest growth. These differences, however, are not so decided when all the colleges are considered as a group and independently of separate classifications. That, in general, most rapid growth seems to attend most severe elimination and slowest growth seems to go hand in hand with higher retention would seem significant when considered in connection with the standards of scholarship maintained by the different types of junior colleges. It seems clear, for example, that the publicly supported junior colleges are following more nearly the pace set by the first two years of four-year colleges and universities in the matter of curricular offerings than are the privately supported junior colleges. The publicly supported colleges show relatively more severe elimination and greater growth which seems to indicate a more profound respect for the more exacting standards of attainment. These colleges are nearer the homes of the students, which may, in part, explain their rapid growth.

Problems of the College Teacher

By A. C. KREY

A Discussion of General Pressing Problems of the Social-Science Teacher

THE field of history and the related social sciences in colleges bristles with teaching problems. One is reminded of the story of the college graduate who was asked to contribute to the then current *Who's Who* and refused on the ground that the quinquennial directory of his own college served that purpose adequately. It may be that other fields offer problems, but the writer knows only of those in his field and offers the "quinquennial" of a social-science teacher.

The teaching problems in the upper years of college, where the professional aim is generally dominant, are relatively simplified by that fact. Attention here will be concentrated upon the junior-college years. If the problems which arise at this level be solved, their solution will contribute doubtless to what may be called the purely pedagogical problems of more advanced work.

It has become the habit of college administrators to shoulder a disproportionately large share of the new load caused by accelerated enrollment upon the social-science departments. This may seem justified by the changed attitude toward the college as indicated by the large numbers of its youth which society is sending there. As the college serves a wider or more immediate social purpose, the social subjects naturally afford an obvious means of satisfying this purpose. The additional fact that it is less expensive to crowd the students into history lecture rooms than to find adequate laboratory space and equipment for all who come may not have escaped the notice of the administration. But, whatever the explanation, the fact remains that the staff of the social-science departments has had to meet mounting enrollments in an aggravated and chronic manner for many years. The necessity of making emergency provision for increasing numbers has left little time for adequate consideration of teaching problems. While the problems have multiplied, the time available for their solution has been diminished. A moratorium should be declared in this field to enable the teachers to solve their problems.

Such an introduction suggests that the social subjects are faced with nearly every imaginable type of pedagogical problem—which is true enough, or rather, too true. Like all other academic fields, its traditional function was to build up a systematic training for the learned professions concerned. Obviously its present junior-college enrollment cannot be handled on that basis. This situation accordingly raises as a first question the fundamental one of defining objectives both in

terms of the subjects and the wants and needs of the students. If these are more sharply defined, there is some hope of greater efficiency in subject-matter content and teaching procedure to meet them. But can these objectives be more sharply defined in a useful, not merely ornamental way? There is a difference between a statement of potential values in a subject for those who pursue it far enough to gain ultimate values and a practical list of objectives to serve as a guide in teaching students, most of whom will not follow the subject far enough to gain such values.

SOME modification of subject-matter has already occurred, but each institution has in the past ten years had to make such modifications largely on the basis of its own wisdom and in view of its own conditions. In some places the traditional subjects have been retained in somewhat extended form. In others, courses formerly open only to Sophomores with certain prerequisite work in the field have been drafted for first-year use without prerequisite. They have naturally been altered somewhat. In other institutions several of the departments have co-operated to provide composite courses. In still others, the administrators have sought to erect new courses of a similar character, but administratively independent of either established departments or groups of departments. Presumably these courses, provided for the same types of students drawn from the same kinds of secondary schools, are intended to serve the same general ends. It would be interesting, and profitable as well, to discover which of these were most nearly satisfying their purpose. But how is this to be determined?

Teaching procedures are almost as varied as subject-matter content, though there has been relatively less opportunity to devise new procedures or new combinations of old procedures. In some institutions the students are entrusted to separate instructors under whose sole direction they are carried through the course. An arbitrary number determines the size of the class. When this is exceeded, an additional instructor must be procured; hence the same course may have a dozen instructors. In some instances an effort is made to maintain unity by means of a common syllabus, common examinations, and regular conferences of the instructors. Elsewhere the work is carried on in large lecture classes capable of almost indefinite expansion. These may or may not be supplemented by weekly quiz sections in charge of assistants. Preceptorial or tutorial conferences are used in a few institutions. The mere physical problem of managing these classes has perhaps received what little attention could be devoted to this side of the work. Even here there is diversity, and effective comparative appraisal might lead to great common gain.

The wide variations in both content and teaching procedure suggest the desirability of standards of comparison. But how far is it possible to measure values in this field, let alone the task of establishing comprehensive standards? There is a slight body of technical terminology in this field as compared with other subject-matter groups. There is a large body of

common terms whose social significance depends upon the manner or the context in which they are used. Advance in the understanding of society proceeds much in the nature of a web, if that can be conceived of as having three, or even four, dimensions. Caesar's crossing of the Rubicon was a singularly unimpressive feat in itself which thousands of American tourists equal every summer. Nor was Columbus' trip across the Atlantic much to boast of, taken by itself. The importance of both achievements lies in their relation to what went before and after. The value lies less in the particular strand than in its complex ramifications. Teachers in this field recognize, as expected outcomes of instruction, skills, mental habits, points of view, and attitudes as well as information, and they regard the less tangible as more important than the tangible. Can measures of such values be devised, which are capable of universal application and reasonable acceptance?

ANOTHER host of problems radiates around the matter of differential treatment on the basis of ability, previous training, and student's aim. The college will probably always have a keen interest in the superior student, though it may have seemed otherwise during recent years. Should these students be segregated as soon as possible and accorded special treatment? If so, how are they to be determined, and what shall be the special treatment? If no segregation seems best, shall there be a graduated series of requirements within the same class for different grades of students? The problems of differential treatment may be common to the whole college, but they are especially aggravated in the social-science group.

A complete list of the problems which the teacher in any of the social-science subjects has to face would be difficult to achieve. There is the eternal problem of imparting generalizations in such a manner that the student not only recognizes their relationship to the illustrations from which they are drawn, but develops some ability to apply them intelligently to new situations. Since the generalization never applies exactly to any given situation, the task of the social-science teacher is much more difficult than that of his colleagues in the sciences, at least during the junior-college years. There is the problem of teaching devices, aggravated for the teachers in this field by the almost unlimited number and even variety of such devices commonly used in the world outside to impart information of social significance. Then there is the further problem of effective liaison between the work of the lower schools and the more advanced work in college. This is doubly aggravated at the present time, first by the complete engrossment of college teachers in their immediate problems, and second by the fact that the lower schools have been in a similar ferment for some time. This matter was touched upon in the report of the Committee of the American Historical Association planning the investigation of the social studies in the schools.[1] The published plan contains a comprehensive outline of problems in the teaching of these subjects, and while major

[1] This is most conveniently available in the *Historical Outlook*, XVIII (1927), pp. 100-22.

attention was devoted to the secondary school, the work of the first two college years was included. Anyone seriously interested in the teaching problems of the collegiate level will find many pertinent suggestions there.

The more important problems touched upon in this paper may be briefly summarized. First, there is a problem of objectives. Will the kind of material and methods of procedure best adapted to train scholars in this field also yield the best results for the great numbers not professionally interested who now compose the majority of our first-year students? If not, what other kinds of material or methods of procedure shall be used and how shall this be determined? In a sense, most of the other problems depend upon this fundamental one. One of these is the problem of differential treatment, whether of groups or of individuals. Another is the problem of methods of procedure. The first concerns itself with the selection of material, the second with methods to be used in teaching. A fourth problem or group of problems radiates about the possibility of increasing the efficiency of instruction in the social sciences through the application of the testing techniques devised by psychology. A fifth problem is that of closer adjustment to the previous and prospective work of the students. This problem is always present, but is peculiarly aggravated at the present time and requires extraordinary attention. In addition, there are all the problems inherent in this field is summarized in the plan for investigation of these subjects in the schools already mentioned.

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Research or Administration

By E. P. CHASE

EVERY profession offers to its members two incentives to good work: the monetary return and the enjoyment of the work itself. In college teaching, the monetary return is limited and seems likely to remain so. The stimulus of a great or even an increasing financial reward is lacking to most college professors. We need not conclude, however, that the college professor must therefore be a person incapable of progress beyond a certain point in his professional development, for his greatest incentives to good work have never been financial.

The non-pecuniary rewards of the college professor are to be found in teaching, in administration, and in research. Of these, teaching, curiously enough, is the least important. There are, it is true, college professors whose particular interest is in some of the major by-products of teaching, such as the pleasure of personal contacts with students, or the feeling of exercising a moral influence over youth. These by-products, of course, are not teaching itself, nor do they appeal, for a whole lifetime, to most mature men. Teaching itself, moreover, will not motivate a whole career

for most men for two reasons. In the first place, the instinct to teach, which is widely found in human beings, is easily fatigued, and just as it is perhaps strongest in women in their early maturity, so it is probably weakest in middle-aged men. Second, most men, in the East at any rate, who are gifted with an unusual ability and interest in teaching, and who teach for a living, are to be found on the staffs of preparatory schools. Here they have a clearer field for teaching exclusively, and here, when at all successful, they are so much better paid than college professors that no college can attract them. They are priceless, and the secondary schools know it.

The stimulus of the college teacher, then, must be something other than teaching. He must, it is true, be interested in teaching and ready to spend time and energy on it. He will be kept continuously active, however, and will be preserved from that dry rot which is the occupational disease of the teacher only by either research or administration.

THE normal American goal in any occupation is administration. A man who starts as salesman rises to sales-manager, in which position he no longer sells, and finally to president. A civil engineer starts as draftsman and rises to be boss of the drafting room. A young clergyman who succeeds as a preacher and pastor of souls is called to a large city church where his duty is to organize and to direct. It is not strange, therefore, that the normal goal of a college professor might seem to be administration. A man trained in English literature starts by reading freshmen themes. Then he teaches upperclassmen. Later, if he is successful, he becomes head of a department, where more of his work is directive in nature and less of it is teaching. Meantime he sits on an increasing number of increasingly important committees. Then he becomes dean and does little or no teaching, or president and none at all.

Administrative work is therefore a natural goal and a legitimate ambition. It is natural also that in administrative work taste should grow with experience and skill with practice. Our most capable college presidents are usually those who have had long and varied experience not merely in teaching but in administration. For the college professor who will arrive at a college presidency or at least at a deanship, the administrative road to professional satisfaction is an excellent one.

Unfortunately there is not, in the ordinary college or university, enough administrative work to go around. Only a few men, therefore, can succeed in it. There is too little to go around particularly because a good deal of it is done in American colleges, as contrasted with English institutions for instance, by professional administrators not chosen from among the teachers—presidents who are presidents but not educators, full-time deans, treasurers, bursars, registrars, secretaries, and personnel officers. If to share in administration is to succeed, only a comparatively few professors can reach the goal. Those whose ambition is thwarted tend to become bureaucratic; thus, heads of departments keep in their own pockets the only key to the closet containing the departmental lead pencils, or prolong

painfully the ritual of ordering a book for the library. And if bureaucracy is harmful in government or business, it is deadly in education.

Administration even at its best has two other disadvantages. Its effect on teaching is bad, for it is always allowed to interfere with teaching. Worst of all, however, administration means perpetual but usually unprogressive activity. A constant variety of unrelated matters have to be settled. Most administrative work is devoted to an attempt to keep things going on as they are, very little is devoted to making progress. A good dean may hope not to improve the college but only that he will not leave it worst than he found it. The administrator has nothing to show for his activity. His successes, being temporary and local in nature, are known only locally. Among the better institutions it is rare for one to borrow a dean from another. A man who becomes a dean at forty, then, is in danger of feeling by the time he is fifty that life has nothing more to offer but a recurrence of situations to handle, all of which have presented themselves to him before and not all of which are pleasant in the handling.

A COLLEGE professor may, finally, be spurred on to do his best by the ambition to distinguish himself in research, that is, to be a master of some special field of his subject, to become a recognized authority in it, and to add, if only a little, to the sum of knowledge in that field. With research just as with administration, taste grows with experience and skill with practice, in fact in research rather more than in administration. A man may be, for instance, an acceptable college president in his early thirties, but no one has ever been a great scholar at that age.

In other respects, research as a goal differs from administration. Like administration, it is a natural instinct but one which is not usually so well developed in Americans of Anglo-Saxon stock as is the instinct for administration. One need not accept the entire Nordic myth to admit that the Anglo-Saxon is gifted with more energy of spirit and less energy of mind than the Celt or the Latin. Since it is Americans of Anglo-Saxon stock who furnish most of our college professors, it is easier to get a sensible dean than a sound productive scholar. In other words, as faculties are now composed, many of their members are misfits: they are men who will never have the chance to succeed at administration and they have no instinct for research. But for anyone with any gift for research and any training in it, the opportunity offered is unbounded. Not only knowledge and skill, but what perhaps counts more as a stimulus, opportunity for recognition increases with the passage of time. The research worker is never tempted to rest on his laurels, for the race never ends.

Again, there are enough research jobs to go around. Every college professor could spend all his available time in research, and under our modern conditions of extension of knowledge, there would still be unknown continents to explore. We even have great research foundations, organized for research and nothing else. But who ever heard of a great administrative foundation, or could conceive it

without laughter? For administration is a means and is limited by the end, but research is an end in itself.

If administrative work is detrimental to teaching, research helps it. Research and teaching both deal with the same subject-matter and in much the same way, especially now that teaching methods tend to approach methods of research. The man who is master of his subject because he has helped delimit it is ordinarily the best teacher.

Finally, the more a man succeeds in administration, the less he leaves for his colleagues to do, and the less successful they will be. In research, on the other hand, the best work is done when everyone is doing it. There is a certain atmosphere of intellectual alertness which surrounds the successful scholar and in which other men find it easier to be scholars. The more research, the more stimulus; the more stimulus, the greater success, not for one man but for all.

Three incentives, then, are offered the college professor to develop his powers. We have seen that two of them are not sufficient. Teaching, which the world considers his sole business, cannot hold his whole interest. Success in administration is a practicable ideal for only a few members of college faculties. It is, indeed, that very emphasis on teaching and on administration which has given us the ineffective profession of which we complain. General recognition in the world of scholarship, rather than local reputation as a good committee man or an efficient dean, should be the normal aim of the ambitious professor. Research, that misunderstood and neglected activity, would restore college professors to self-respect and free their spirits from the conviction of failure which oppresses so many.

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High Standards of Achievement

By MAX McCONN

NEARLY all of us are democrats and humanitarians at heart and wish to adhere to the ideal of human equality and to make that ideal effective in our American society, so far as it is intrinsically valid. This in spite of the fact that we are forced by our present-day knowledge to recognize inescapable limitations of its validity. Accordingly we have need, with a great urgency, to formulate a valid democratic doctrine especially in the field of education.

Let us review some of the more obvious considerations which must underlie such a formulation. First, men are not created equal in their physical endowments, still less in their mental capacities, but come into this world with great differences of aptitude—differences both of kind and of degree. There is no known way of equalizing these native differences to any large extent, even if it were desirable to do so. Some equalization can, to be sure, be accomplished through education, and this is now being done in our

schools and colleges. This process, however, means leveling down even more than leveling up, and the retardation of the gifted which is involved is undesirable both from the point of view of the superior individuals who are held back from their fullest development and from the point of view of general human welfare. Further than this, men are born into unequal social and economic stations. These external differences are also extremely difficult to equalize, but it is of the essence of democracy that they should be equalized as far as possible, at least in the sphere of education.

On these simple points we can base a really valid democratic educational doctrine, as follows: That every youthful citizen of a democracy, whatever his social status or financial circumstances, is entitled to an education fitted to his kind of ability and the full extent of that ability, but to no other kind or degree of education and to no pretence of any other kind or degree.

Perhaps this statement sounds platitudinous, even innocuous. Platitudinous it may be, but not innocuous. It is really revolutionary if educators should ever begin to act upon it and if their constituencies would permit them to do so. Let us trace a few of its implications.

First, there is the negative implication. On the negative side, that doctrine, if put into practice, would mean that at least fifty per cent of the students in our colleges and at least fifty per cent of the students in our secondary schools, both public and private, would have no right to be there and would be dropped from the rolls, because they have not the kind of intellectual capacity nor the kind of intellectual interest needed to profit in any real way—according to worthwhile standards of achievement—by an academic or liberal or cultural training. Many of them are not, in fact, even seeking the reality of such education, but only the pretence of it. They want chiefly the social prestige of being known as college men and a passport to a "white-collar" job.

Consider for a moment what you could do in your school with the upper half of your student body if you could get rid of the lower half. Develop high standards of achievement? They would spring up full blown overnight. It would be a teacher's paradise and, what is infinitely more important, an intellectual and cultural paradise for able and enthusiastic students, from which they would go immeasurably better prepared than they do now for the greater and finer tasks of a civilized society.

AS democrats and humanitarians, however, we are most interested perhaps in the positive implications of the doctrine. What does it mean in the way of acceptance rather than of rejection, of opportunities afforded rather than opportunities, or ostensible opportunities, denied? Although by the negative implication all our enrollments would be cut in two, it does not follow that any of our present institutions of secondary or higher education would necessarily close down or that any of the teachers, even of narrowly academic subjects, would be out of a job. For the second implication of my doctrine is that the states or the nation or both should undertake a systematic and exhaustive searching and testing out of high native endow-

ment of every kind in all ranks of the population, and should make financial provision for the cultivation and development of high capacity irrespective of the economic status of the family in which it occurs. If this should be done, we should without doubt straightway see enrollments refilled with students at least as gifted as the upper half of the present groups.

What basis is there for this somewhat optimistic view? I base it on the considerable number of able college students whom I have known personally who have come from the poorest possible economic status—sons of barbers, of old clothes men, of track walkers, of common laborers. Under present conditions, when the principal actual requirement for admission to college is the ability to spend from $1,000 to $2,000 a year, such students reach college, of course, only by most extraordinary efforts on their own part, or else by sheer good fortune through having some well-to-do relative or through attracting the benevolence of some philanthropist. The percentage of the gifted from the lower economic classes who can reach us by such means must necessarily be small. If provision should be made which would bring us even the most highly gifted alone from among them, we would be overwhelmed. And think what it would mean for society!

Nor is this idea merely utopian. The new German Republic, for instance, is undertaking to work out and put into operation just such a plan, and every other civilized nation will eventually be compelled to follow suit. The thing has never been practicable until of late years, but it is perfectly possible now, because we have, partially developed at least, the necessary technique for searching and testing out, and we have the necessary social wealth—at any rate if we scrap a few more battleships. What such a plan of conserving and exploiting all our human talent would mean for industry, for business, for science and the arts, for government, is thrilling to consider.

As democrats and humanitarians, however, we must go one step further. How about the rest of the children?—the lower half in our present schools and colleges whom this doctrine would eject and those children of the poor whom the searching and testing would not select for our schools and colleges? Are they to be left in darkness?

Let us face the facts squarely. There are undoubtedly a great many whose mentality bars them from any known kind of education at the secondary and higher levels. Teachers in secondary schools and colleges have never officially come into contact with this group. These children drop out of school at various points between the first grade and the sixth. As far as we can see now, the only possibility for these less capable ones is training in various manual skills, such as the more progressive school systems are now beginning to provide.

BUT for those now in academic secondary schools and colleges whom our doctrine rejects therefrom, other and better provision—better for them — can and should be made. Nearly all of them have real and worth-while aptitudes and abilities, but not in the fields which we schoolmasters commonly call intellectual. Latin is to them a very dead language,

history an insupportable tedium, algebra an unthreadable maze, physics a blank wall, and the Romantic Movement leaves them cold; but these things do not cover the whole of life. Many a boy whom I have had to tell goodbye after he had "flunked out" can take an automobile to pieces and put it together again better than the factory hands did it. Many more have a fine gift for business and administration, displayed in class politics and on dance committees, which leaves me ashamed of my inept handling of my own administrative job. Still others have real talents in the fine arts, for which most schools and colleges now afford little scope outside the antics of the glee club or comic opera.

For these and others, we need new schools of a more practical sort of secondary and at least junior-college grade—technical institutes, business institutes, agricultural institutes, and the like. In such schools these students, whom we ought to reject from our colleges, would not be in the lower half of their classes but at the top. We ought to reject them because with them it is impossible to develop high standards of achievement in the narrowly intellectual lines on which we are working, and their presence with us hinders us in developing high standards with the rest of our group. But in the kind of schools they ought to have they would maintain and help develop high standards of achievement in the sphere of their own aptitudes and interests.

How can we develop high standards of achievement? My answer is that we must adopt and put into practice a really valid doctrine of democracy as applied to education. Such a doctrine must involve in theory, first, a real acceptance of the fact of individual differences of ability and interest and, second, a refusal to be governed, as we are now, by economic circumstance in selecting those to be educated. Such a doctrine, in practice, must imply, first, the rejection from our present secondary schools and colleges of at least the poorer half of our student bodies; second, the replacement of this rejected group, presumably at public expense, by gifted students from the lower economic strata; and, third, the establishment of new schools to conserve and exploit many worth-while aptitudes and interests for which our present schools can make little provision.

WITH THE TECHNICIANS

Quantitative Measurement

The National Society of College Teachers of Education continues the survey of investigations of higher education in its Eighteenth Yearbook, *Quantitative Measurement in Institutions of Higher Learning*, which has just come from the University of Chicago Press. The casual reader is first impressed by two long lists which the book contains. The first list includes standardized tests designed for use in institutions of higher learning: achievement tests in English; spelling; foreign languages; literature, arts, and music; mathematics; physical sciences; social sciences which in addition to the subjects usually grouped under this term include home economics and psychology; education; and miscellaneous under which are listed accounting, agriculture, mechanical drawing, mental hygiene, religion, and stenography. Intelligence tests, aptitude tests, tests used for vocational guidance, and non-intellectual tests swell the list to 234 items. The second list is a selected bibliography comprising 664 titles of quantitative studies which have been made in educational institutions beyond the high school. One more impressive numerical measure gleaned from this compendium is the statement that in more than 85 per cent of the 308 colleges and universities—institutions co-operating in one study here reported—results of standardized mental and educational tests are used in diagnosing the needs of individual students and in prescribing remedial work.

The use of quantitative measures in assisting the Freshman to orient himself to collegiate surroundings and in predicting his academic future is the theme of a chapter in which reports of many studies of Freshman Week, educational guidance, orientation courses, and prognosis of academic success are summarized. The other chapters, similarly, are surveys of available investigations in which quantitative measurement has been applied to the construction of collegiate curricula, has been used to appraise teaching, and to diagnose the difficulties of students or to evaluate remedial instruction. Although Dr. Bagley has somewhere said that the quantitative measurement in higher education seems to afford a fairly virgin field, this yearbook and its predecessor show evidences that cultivation has begun.

Preparation Then and Now

The complaint that students are not so well prepared today as they used to be is firmly contradicted in a pamphlet, *The Quality of Freshman Preparation Then and Now*, recently published by Purdue University. In this little monograph Dr. H. H. Remmers compares the records made by the engineering students belonging to the freshman class in 1919 with

those made by the corresponding group of Freshmen in 1929 on the same six tests of general subject-matter taught in high school.

The freshmen engineering students of 1929 made average scores markedly superior to those of 1919 engineering students, with a single exception of a test in mechanical information, the content of which is not taught in high school. Dr. Remmers remarks that "apparently the facilities for summarizing such knowledge has not noticeably improved." He ascribes the superiority of the average scores in 1929 as due to improved high-school instruction.

There has, however, during these ten years been a steady and marked increase in the percentages of Freshmen failing in English and mathematics. Indeed, this rise in the percentage of failures has been general in practically all departments of the University. A number of factors proposed as possible causes of this increase in failures were each in turn examined and rejected because of the lack of validity. The most reasonable explanation, according to the author, is that there has been during this period a continuous rise in the standards set by the University.

Evaluating Freshman Week

In the fall of 1927 the Ohio State University inaugurated a Freshman Week Program under the direction of a committee of three faculty members, known as Freshman Week Council. After three years of managing the the program for Freshman Week the Council requested an evaluation of their work, and President Rightmire appointed a faculty committee to make

This committee has submitted to the President a seven-thousand-word report, in the Preface of which their findings are summarized as follows:

Last October we set out to answer two questions: (1) Is Freshman Week thought to be a successful and valuable project? and (2) Should the organization of Freshman Week be amended in the event that the first question is answered in the affirmative? To answer these questions we gathered data from seven sources: twelve hundred and eighty-seven Freshmen, sixty-three upperclassmen picked at random, forty-seven upperclassmen who acted as group leaders, ninety parents of Freshmen, sixty-five members of the faculty, sixty-six other members of the faculty who acted as group leaders last fall, and twenty-eight administrative officers.

The answer to the first question that comes from these data is a decisive affirmative. The statistics that we have gathered and the statements written to the committee are conclusive in their approval of Freshman Week. It is perhaps sufficient to say here that they can be interpreted in but one way: Freshman Week is fulfilling a felt need and is fulfilling it successfully.

With the value of Freshman Week so generally agreed upon, we proceeded to discuss question two—the administration of the program, and we have brought together the following findings:

1. There is no basis of fact in the criticism that Freshman Week is a serious financial burden upon Freshmen and their families. Of the 1,237 who answered our questionnaire, but 78, or about five per cent, suffered any financial loss, and the majority of these despite their losses were still glad to have had their experiences of Freshman Week.
2. There is, likewise, no basis for the occasional observation that the majority of Columbus residents in the freshman

class find Freshman Week valueless and the campus tour particularly irksome. A small number do object, but Columbus residents as a group are as favorable toward the program as are their fellow classmen, and only a very small number object to the campus tour.

3. We have found, however, some basis for the criticism that Freshman Week is too rushed and crowded, and to change the tempo of the week we have proposed that several events be dropped and that two others be distributed over the first week of the quarter. Should our recommendations be adopted it would be possible next year to reduce the length of Freshman Week and leave the Monday before the opening of the University free for both leaders and Freshmen.
4. To increase the value of faculty interviews with Freshmen we have proposed that students be grouped by colleges and that faculty leaders be instructors in the college of their group.
5. We have proposed that the Freshman Week Council reorganize its specification for faculty leaders so that leaders will not be required to give so much time to Freshman Week. We feel that were the burden of time lightened many more faculty members would be willing to serve as leaders.

The Questionnaire

The questionnaire is styled "prescientific procedure" by Dr. Christian A. Ruckmick in an article, "The Uses and Abuses of the Questionnaire Procedure," in the last issue of the *Journal of Applied Psychology*. The weakness which he ascribes to the questionnaire is that it stresses categorical answers and therefore encounters the dilemma that the expert is likely to refuse to be explicit or categorical in his answers, while the immature respondent will likely be both explicit and categorical, but his information will be untrustworthy. Other sources of error are the uncontrolled and uncontrollable nature of the replies and the uncertain character of the interpretation which may be put upon the results. Because of the questionnaires which are not returned and the blanks left in the forms which are sent back the statistical treatment accorded the data of a questionnaire often leads to erroneous interpretations of the facts as they are.

Dr. Ruckmick does acknowledge certain advantages to be gained from this form of gathering data. Time is "the major significance," for "thousands of individual returns may be gathered when, because of the exigencies of both space and time, it would be next to impossible to gather nearly as many cases by any other procedure." The answers to a questionnaire may also furnish cues to further investigation, and the skilful person who undertakes to make a good questionnaire will be led to scrutinize the entire field from many angles.

Summarizing the advantages and disadvantages of the questionnaire as a research technique Dr. Ruckmick writes:

> Strictly speaking it is not an experimental method. One may call it a prescientific procedure. It is antecedent to and dependent upon further experimental research. When the questionnaire is made out by obviously inexperienced and scientifically untrained individuals, very little of scientific value can be hoped for. Under those circumstances, the author is quite in agreement with those who believe that answering it would be not only a waste of time, but conductive to misunderstanding

and confusion of thought. Its abuses are notoriously dangerous and only when all other means fail should it be resorted to. The writer does not mean to question the historical place of the method and the value of data which have added to our psychological knowledge in the past, but he would stress the need of treading cautiously and of pressing ever forward to improved techniques in the future.

Prejudices of Students

Are well-educated people without superstitions and prejudices? Any one of us knows he has them, though often unconsciously. Just how far does education enable one to reduce his superstitions and prejudices? Such pertinent questions tempt the psychologist, and in the *Journal of Abnormal and Social Psychology* for January-March Mr. Gilliland, of Northwestern University, presents a study of the superstitions of college students. The study was based upon the effects of a course in general psychology upon two wholly different groups of students, one group representing the typical academic student, the other the almost equally intelligent non-academic. The former was a class of 103 students in the College of Liberal Arts of Northwestern University, of sophomore and junior rank, average or slightly above the average college student. The latter was a class of 46 students in the evening classes of the School of Commerce, having not more than freshman standing in college and representing the typical intelligent small executive and skilled worker. The test used was a modified form of Nixon's test which consists of thirty rather common superstitions and prejudices. Ten additional questions were added, making forty items in all.

At the first meeting of each class the set of questions was given them; they were told to answer the questions to the best of their ability, no further comment being made except that they would be told later about the test. At the last meeting of each class the same set of questions was given again. This time no comments were made, but when asked, the examiners replied that the test was the same set of questions answered at the beginning of the semester.

The following are some of the questions asked:

The opposite of red is green.
Women are inferior to men in intelligence.
All ideas probably originate in the gray matter of the brain.
A square box looks higher than it is wide.
Many eminent men have been feeble-minded children.
People with greenish eyes are not as trustworthy as people with blue or black eyes.
Adults sometimes become feeble-minded by overstudy.
No defect of body or mind can hold us back if we have will power.
An expectant mother by fixing her mind on a subject can influence the character of her unborn child.
It really is unlucky to have anything to do with the number 13.
A square jaw is a sign of will power.
Intelligence can be increased by training.
A man's character can be read by noting the size and location of special developments of his head.

The data brought out many interesting facts. The course in psychology

brought about a reduction in the prejudices of each class, and an appreciable one. The liberal-arts students showed an average reduction of from 9.58 superstitions to 6.15 per student—a reduction of 36.8 per cent. Those of commerce reduced their score from 11.98 to 6.58 or 45.2 per cent.

The evening-class students had more initial superstitions; these were reduced to not much above the level of the regular college group. Correlations were made between the test scores and the grades in psychology, the result showing that in each class the better students had slightly fewer superstitions at the beginning of the course, but that they reduced these prejudices by a much greater extent.

Predictors of Success

The Committee on the Industrial Aptitudes of Technical Graduates of which Mr. A. N. Greene is chairman, rendered a progress report at the 1929 meeting of the Society for the Promotion of Engineering Education. This report has been published in a recent issue of the *Journal of Engineering Education.* From the data before the Committee there seem

> no absolute traits or characteristics in the graduate which directly mark [him] as a future executive. On the other hand, there are trends which indicate success in executive abilities. It is believed, however, that those same trends would be as negative were we to seek predictive characteristics from which to judge ability and future success in other fields of endeavor.

Scholastic record seemed an excellent guide, and in most cases the successful executives came from the upper sections of the classes. Unsuccessful men generally came from the lower sections, but some failures were found in the upper third. Extra-curricular activities, self-support or partial self-support, and desire to work in the summer, showed no discernible indicators.

From the present status of their study, the members of the committee believe that success depends so largely on the mental traits shown by the students that scholastic achievement and the opinions of faculty members regarding the personality of the students concerned are the most important factors by which to predict future success as executives and as men.

Wandering Scholars

The largest student migration in the history of the world is occurring at the present time, and the greatest number are coming to our own country. In *Current History* for March Mr. Archie M. Palmer, Associate Secretary of the Association of American Colleges, present most interesting statistics concerning the wandering scholars of not only the present day but also of medieval times. The number of students from foreign lands studying in institutions of higher education in the United States is well over ten thousand. Several thousand others in preparatory schools swell the number to an estimated fifteen thousand.

The migrations to Germany in the last decade of the nineteenth century, when Germany was at its peak educationally, never approached this figure. In 1901 foreign students com-

prised 7.5 per cent of the enrollment of the German universities. From data obtained in that year we find that there were 6,284 foreign students in Germany; 1,770 in France; and in 1904 there were 2,673 in the United States.

Here in the United States there is a marked migratory tendency among college students. By a survey several years ago an average of nearly 25 per cent of American college students go outside their own state. Only 21 per cent of the students now enrolled in the college of New Jersey are native to that state. In Connecticut all but 34 per cent migrate to other states. In California 90 per cent study in their own state, in Texas about the same number. Over 80 per cent in Oregon, Utah, Nebraska, and Minnesota register in their own states. In Massachusetts over 25 per cent attend colleges or universities elsewhere, in spite of the excellent opportunities in their own state.

Harvard Law School in 1928-29 totaled 1,534 students. One-fifth of these were from Harvard College; two hundred seven colleges were represented by the other students. Forty-five states, the District of Columbia, four possessions of the United States, and nineteen foreign countries had students at Princeton in 1928-29 in a total enrollment of 2,485. Yale Graduate School in 1928-29 enrolled 709 students from North and South America, the British West Indies, the British Isles, nine countries of Europe, South Africa, Egypt, four countries of Asia, Australia, New Zealand, and the Dutch East Indies. In Columbia University in 1928-29 there were nearly one thousand students from foreign countries and the possessions of the United States.

Before the World War the cultural influence of the United States on Europe was slight. The number here from abroad was negligible. There were few exchange professors, and visiting professors were almost unknown; American contributions to scholarly periodicals of international character were relatively few; the influence of American literature was comparatively unimportant in Europe. Recognition, however, was given to American men for their work done in scientific research. Practically the only scholarships were the American Scandinavian Foundation Fellowships and the Rhodes Scholarships.

After the war the desire to know more of America spread. The result was that the United States became a veritable mecca for students from all over the world. Foreign countries hitherto comparatively indifferent to the presence of American students are now making efforts to attract them. Numbers of fellowships are now involved, the mere enumeration of which would fill a ponderous tome.

Mr. Palmer feels that student migrations have been and will be one of the most effective methods of bringing about a mutual understanding among nations. With Vincent Massey he believes that "the realities of international affairs are nowhere better understood than in the realm of education."

·· THE REPORTER ··

The president of the University of North Carolina, Dr. Harry Woodburn Chase, has been elected president of the University of Illinois, succeeding Dr. David Kinley, who will retire June first. Born in Groveland, Massachusetts, forty-seven years ago, Dr. Chase was graduated with the bachelor's degree from Dartmouth College in 1904, took his master's degree there in 1908, and in 1910 he received his doctor's degree from Clark University. He has been on the faculty of the University of North Carolina since his graduation from Clark, serving successively as professor of the philosophy of education, professor of psychology, acting dean of the College of Liberal Arts, and president. To the office last mentioned he succeeded in 1919.

Under Dr. Chase's regime the University of North Carolina has increased its registration from about one thousand to nearly three thousand, with the summer school and extension courses serving ten thousand more. Annual appropriations for maintenance have increased more than 400 per cent, and under his direction more than $6,000,000 have been expended upon developing the physical equipment of the university.

Six years ago he organized an institute for research in social science, now nationally known, and he has during his eleven years of office organized departments of music, journalism, sociology, public welfare, and a school of commerce.

To balance the quadrangle system for undergraduates recently made possible at Yale University by a gift from Edward S. Harkness, President Angell has recently announced a gift of $3,000,000 for a graduate-school quadrangle from the trustees of the estate of John W. Sterling. A maintenance fund of approximately a million dollars accompanies the gift for buildings.

Last year the Maryland legislature authorized the appointment of the commission on higher education, and Governor Ritchie has recently announced its personnel. The following excerpts taken from Governor Ritchie's announcement were quoted in *School and Society* for February 15:

> The relationship between the state on the one hand and the University of Maryland and the various state-aided colleges on the other has presented difficult questions for a good many years. Different opinions have existed as to what the university's scope of development should be, and on one occasion, at least, these led to a serious division in the legislature.
>
> Our public-school system has been placed upon a sound and well-understood basis. The policies behind that system, including the equalization fee, provisions for teacher training and other important matters, have been settled, so that the future of our public schools is principally a question of administrative and executive efficiency.
>
> At the last legislature it seemed to me that the time had come when the state's policy toward higher education should be similarly established, and that a future program for carrying out such policy, say

for the next five or ten years should, as far as possible, be mapped out. This would involve the future needs of the University of Maryland during such period, and if accepted it ought to eliminate controversies in future legislatures as to the budget requirements of the university in all its departments, both at College Park and in Baltimore City, and including, of course, the university hospital.

Such a study would also consider the state's future relationship to the several state-aided colleges, such as St. John's, Washington, Western Maryland, the Johns Hopkins and others, and their status, financial and otherwise, with regard to state help.

The plan of making the Johns Hopkins University a graduate institution may also have considerable effect on the other colleges of the state, and on the facilities which the state should afford in furnishing undergraduate education.

THE new method of selecting American students for Rhodes Scholarships, reported in this department in the March number, is meeting opposition from a group of former Rhodes scholars under the leadership of James H. Winston, of Chicago. Mr. Winston observes that "Parliament acted as it did because it thought it was carrying out American wishes in the matter. This is not true. Rhodes scholars and college presidents generally are opposed to the plan, for it would deprive many states of scholarships that were definitely bequeathed to them."

PRINCETON UNIVERSITY has announced the establishment of a School of Public and International Affairs. The purposes of the school will be to give young men a preliminary foundation for public and international careers and equip them "in a broad sense in the fundamentals of citizenship." A prospectus, recently published, announces that "the primary purpose of the school is neither research nor vocational training. It is a school where the first emphasis will be placed on instruction in liberal studies."

Both undergraduates and graduate students may take courses in the new institute which will have four principal features: first, it will provide a co-ordinated training in liberal studies in the fields of history, politics, economics, economic and political geography, and modern languages and literature; second, it will add to the faculty in these departments, visiting lectureships to be filled by men of experience in world affairs who will present to the students actual conditions existing in the world today as seen from the practical side; third, it will arrange for exchange professorships and fellowships with foreign universities; and fourth, students of the school will engage in supervised study in foreign countries during summer vacations.

WRITING recently in *Antioch Notes*, President A. E. Morgan of Antioch College, had this to say about the recently inaugurated method of independent study at Antioch:

The Antioch autonomous program provides upper-class students with unusual freedom to organize their time and to pursue their studies in their own way. The results of this program vary greatly, because of the differences in the capacities of individual students to organize their lives, because of the differing character of the various fields of study, and because of differences of interest and skill of faculty members in its operation. The best work is better and the poorest work is poorer than formerly.

THE Geneva School of International Studies will this summer hold its seventh annual session from July 14 through the early part of September. The principal features of the course will be a series of weekly lectures and discussion on international problems, and during the last days, attendance at the meetings of the League Assembly.

The faculty include scholars of international reputation in all the social sciences. In addition to the lecturers, there is attached to the school a staff of tutors, who meet the students in small groups for discussion of the lectures. A seminar for advanced students is also being conducted by Professor Alfred Zimmern, director of the school.

Last summer the enrollment was four hundred fifty, representing thirty-seven different countries. The total staff consisted of sixty-one different lecturers, representing twenty-one different countries. The school is affiliated with the University of Buffalo, through which arrangements may be made for accrediting toward any American degree work done at the school. The school's New York office is at 218 Madison Avenue.

TEN prominent members of the faculty of the University of Michigan are to give courses of five lectures each to alumni during the week following commencement this year. Subjects included are American history, contemporary drama, the arts, foreign relations, landscaping, and investments. This is one of the projects of the University of Michigan's Alumni University.

AFTER an exhaustive study of the resources and requirements of Columbia University, six prominent citizens, acting as a fact-finding committee, have united in a report urging contributions for the support of the University as "the finest fruitage of citizenship" in the City of New York.

The committee fixes Columbia's immediate needs at $39,500,000, of which $9,500,000 is required for buildings, and $30,000,000 for endowments. It points out that the fortunes which are built up in New York "come into existence by reason of New York itself," and declares that gifts and bequests to Columbia should arise unasked from the idealism of the people.

The committee was composed of the following: Bernard M. Baruch, financier, who was economic adviser for the American Peace Commission, and who in other capacities was active in the economic settlements arising from the World War; Walter S. Gifford, president of the American Telephone and Telegraph Company; Philip G. Gossler, president of the Columbia Gas and Electric Corporation; Darwin P. Kingsley, president of the New York Life Insurance Company; Morgan J. O'Brien, former judge of the New York Supreme Court; Henry S. Pritchett, president of the Carnegie Foundation for the Advancement of Teaching.

AN increase in undergraduate tuition from $400 to $450, effective next fall, has been announced by Yale University. The notice stated that additional appropriations would be made to the undergraduate scholarship and loan

funds, from which self-supporting students already receive financial aid approximating $300,000 a year.

ADDRESSING the alumni of the University of Chicago, President Robert M. Hutchins recently proposed the reorganization of the university into three divisions, instead of the present two: a college division covering what is now called the junior-college area, a senior-college division, and a graduate school. The first is referred to as collegiate; the other two as university. Supporting these recommendations, President Hutchins had this to say:

> The experiments of this division should center on what we have to call for lack of a better term orientation: the business of getting a student started on his education. It is clear that all our students will not come to us with the same degree of preparation or the same abilities. In short they will not require the same amount of orientation. Therefore we should regard the stay of any student in the collegiate division as dependent on the rapidity of his own adjustment, his own reaction to the University's opportunities, and his own qualifications for advanced work. Normally an individual might spend two years in the collegiate division. On the other hand, he might spend one or three. The time spent there should be determined not by any artificial standard, but by his own capacities.
>
> At the conclusion of this period, however long or short, he should enter upon what I call again in clumsy language a university as distinguished from a collegiate program. Here his object should no longer be to take a general survey of the world, but to begin the study of some division of it which is of particular interest to him and which he is qualified to deal with. But this program should be flexible too. He should go as fast as his abilities permit. He should have that attention that his interest and intelligence may justify. In subjects in which he chooses to specialize he should have a minimum of instruction and should put forth a maximum of independent effort. In those which he merely wishes to know about he should be lectured to en masse by the best lecturers to be found. His qualifications for a Chicago degree should be determined not by the number of majors he has succeeded in accumulating but by his mastery of his chosen field and his general cultivation.

THE American Association of University Women has recently announced the organization of a Research Information Service in the field of secondary and higher education. This office, located at 1634 I Street, Washington, D. C., will answer inquiries on all topics in these fields. Requests should be addressed to the Acting Director and Educational Secretary.

ACCORDING to New York newspapers, Professor Alexander Meiklejohn, former president of Amherst College, and chairman of the Experimental College at the University of Wisconsin, had these interesting comments to make upon the purposes of higher education:

> First, the college must give the student some skill for work and prepare him for a vocation. Second, it must help him to find the livest and keenest joy in the world —to love learning and realize the enduring fun in scholarship and the sheer thrill of learning. Finally, the schools and colleges must teach their charges the way to wisdom and understanding.
>
> Man has never found it possible to arrange the world so that life is completely satisfactory, therefore the student must be taught to understand his fellowmen and the world he lives in. He must study so that he can improve living.

Beauty and ugliness have always been with us. Especially has our industrial life made the world ugly. In the modern world, truth has a hard time surviving in the welter of propaganda.

Men fight because they do not know a better way of settling their differences of opinion. Yet no one wants war. No one wants poverty or servitude or ugliness or untruths. But we have not been able to arrange things so that we are without them. That is why we must study.

THE student enrollment of Rollins College, Winter Park, Florida, will be limited to seven hundred, according to recent announcement, and its freshman class, beginning with the fall of 1930, will be limited to seventy-five men and fifty women.

In announcing this limitation policy, Hamilton Holt, president of Rollins, observed that he believes that Rollins will be able successfully to combat the "three besetting sins of the American college and university today" which he summarizes as "first, the insatiable impulse to expand materially; second, the glorification of research at the expense of teaching; and third, the lack of human contact between teacher and student."

A GROUP of undergraduates at Wesleyan University recently projected an extensive survey or student life and opinion at Wesleyan. They have prepared a sixteen-page questionnaire probing into an individual's undergraduate life and reactions to the many phases of college education. Over 95 per cent of the student body has responded to questions on the following problems: fraternities, faculty-student relations, athletics, reasons and purposes for coming to college, the curriculum, vocational guidance, social life, compulsory chapel, auto regulations, class cuts, the honor system, and numerous other problems.

THE State Teachers College at Buffalo, New York, has under construction a new group of buildings on a new twenty-acre site. The State of New York transferred to the City of Buffalo a tract of unoccupied land, about ninety acres in extent, twenty acres of which the city returned to the state as a building site for the new State Teachers College. In addition the city agreed to build a plant consisting of four separate buildings and the president's residence. In return the City of Buffalo is to receive the buildings and grounds now occupied by the institution.

The college has committed itself to the development of a four-year program in elementary education, training teachers for the elementary schools from kindergarten through the junior high school. It believes that in this feature also it is unique among state-supported teacher-training institutions.

The new group of buildings will form a part of an educational center including the Albright Art Gallery and Art School, the Buffalo Historical Society Building, and the McKinley Vocational High School. The buildings are arranged in the form of a quadrangle. The general architectural style is Georgian Colonial.

THE Conference of Theological Seminaries and the Institute of Social and Religious Research has recently

begun a three-year study to determine the conditions of theological education in the United States. The Princeton Theological Seminary, the Union Theological Seminary, and the Harvard Theological Seminary are cooperating in the enterprise. Professor Mark A. May, of Yale University, has been appointed director, and in his investigations he will use the facilities of the Institute of Social and Religious Research.

A NEW plan for enlarged academic freedom for its best students has recently been announced by Franklin College, at Franklin, Indiana. The chief characteristics of the plan are as follows:

1. During the second semester of his sophomore year a student may apply for admission to the new plan of study.
2. Those selected will be relieved of all formal hour and point requirements and allowed a large measure of independence in their work. They will, however, be under close guidance and supervision of the members of the faculty in their chosen fields.
3. Students working under this plan will be required to present to the faculty evidences of original or creative work in their respective fields. This may take the form of a written thesis which will be in the nature of an elementary research project.

BATES COLLEGE has recently announced a development program for the next ten years estimated to cost in the neighborhood of $3,000,000, of which $1,400,000 will be used for new buildings and renovations of old structures. The remainder will be expended for salary increases, new faculty, and student scholarships.

A QUESTIONNAIRE addressed to the undergraduates of the University of Washington, for the purpose of discovering data concerning the teaching efficiency of the members of the faculty, was recently distributed by President Lyle Spencer. The questionnaire is exhaustive and includes twenty-five groups of questions, a sample of which, relating to the use of the lecture hour, is as follows:

J. What use was made of the lecture hour? (More than one statement may be checked.)

1. Most of the material presented was contained in our reading.
2. It consisted largely of material dictated to us for inclusion in our notebooks.
3. Most of it could have been presented as effectively in mimeographed form.
4. The lectures presented original points of view that stimulated our thinking and study.
5. Much time was spent in the lectures in irrelevant anecdote.
6. The lectures presented much valuable material not available to the class in its reading.

In announcing his questionnaire plan, President Spencer wrote as follows:

What would it be worth to a university professor if he could obtain a valid appraisal of each of the varied activities that make up his teaching? Such an appraisal would answer questions continually asked by the thoughtful teacher: How do I compare with other men in my ability to arouse interest? Are my lectures clear, or do they seem muddled to my students? Does the way I give assignments contribute to my effectiveness as a teacher? Do I maintain a good balance between lectures and discus-

sion in my classes? How do the students regard me as a personality? Forbidding? Approachable? Interested in them or indifferent to them? A teacher having in his possession reliable information to 50 questions of this kind would be in position to plan intelligently the improvement of his teaching skill.

THE Survey Commission appointed by Governor Henry S. Caulfield of Missouri to investigate the needs of higher education in the state, under the chairmanship of Mr. Allen McReynolds, has recently submitted its report. Mr. McReynolds has made an extensive comparison of the program of the State of Missouri with its sister states and has recommended that the legislature be more liberal in its appropriations if the State of Missouri is to do work in higher education comparable with that being done in Michigan, Wisconsin, Ohio, Illinois, and California.

A NEW plan of study in the Department of Education at Yale University, to be introduced next fall, was announced today by Professor Clyde M. Hill, chairman of the department. Under this plan, a group of graduate students working for the M.A. or Ph.D. degrees, limited to fifty in number, will be selected with especial reference to their intellectual maturity and capacity for independent thinking. This group will be given freedom from conventional courses and credit requirements, will be completely separated from extension or undergraduate students, and will have at its disposal practically the full time of seven members of the faculty—four professors, one associate, and two assistant professors. Additional members of the Department of Education and other departments of the Graduate School of the university will be available for work in special fields. Fifteen teaching fellowships, ranging in value from $500 to $1,800, and totaling $15,600, are being offered for suitable candidates in the department next year.

SPEAKING recently before the Alumni Council at Amherst College, Dean Frederick J. E. Woodbridge, made the following trenchant observation concerning the flood of college registrations during the last decade and a half:

I think that young people go to college for a different reason than the one they give; and very few of them know what that reason is. The reason, I am convinced, has little to do with vocational or intellectual interests, and much to do with social and moral interests. Going to college represents in our society one of the advantages of life. It has come to be more and more one of the things that are done, if one can do them. Without implying any odious comparison, it is like going to Europe or to a college game of football—something which goes to make up that sum of those possessions which are counted among the factors of a good life. It is the going that is important, and often more important than the consequences of going. In short, college is wanted in the same way, and not in a different way, as other supposedly good things are wanted. It is wanted as one of the possessions in what the Declaration of Independence calls the "pursuit of happiness." Of course, there are many who go to college with a wholly different attitude, but I am speaking of that social attitude which I regard as responsible for the fact that young people are going to college in large numbers, and

often with no reason which can be defined in terms of a special purpose, or their fitness, or their performance.

THE University of North Carolina Extension Division this summer plans an eight-weeks transcontinental study tour doing field work in natural science and social science. Two automobile parties will travel in specially constructed cars, stopping at points of interest throughout the United States. The courses offered in the natural sciences will be confined to geology, botany, and general science. In social science the courses will include sociology, economics, and physical and economic geography.

TO assist undergraduates in deciding upon their vocations a "Consultant on Careers" has been appointed at Harvard College. Co-operating with the Alumni Placement Service, the Dean's Office, and the student Employment Office, the Consultant on Careers will assist students in making their vocational adjustment easier and more profitable. An officer who will perform a similar service has also been appointed recently at Northwestern University.

WENDELL S. BROOKS has recently entered upon his duties as president of Intermountain Union College, Helena, Montana. Dr. Brooks has had extensive experience both as administrator and teacher in secondary schools and colleges. He has served at Carleton College, Northwestern University, and at the University of Chicago. He received his bachelor's degree from Yale in 1908, his master's from the University of Chicago in 1921, and his doctor's from Northwestern University in 1925.

·· EDITORIAL COMMENTS ··

MEASURING RESULTS

AN interesting and significant compilation of quantitative studies in institutions of higher learning has just been released by the National Society of College Teachers of Education in their eighteenth yearbook. As one studies the yearbook, one is struck by the large number of quantitative studies that have been made in this field which everyone has thought the neglected area in education.

We find two hundred thirty-four different standardized tests listed which are available for use in college. There are achievement tests in English, the foreign languages, literature, art and music, mathematics, the physical sciences, the social sciences, accounting, agriculture, mechanical drawing, and stenography. Thirty-six intelligence tests have been standardized, and tests of aptitude as well as of vocational guidance have been devised.

Much has been done in the field of prediction of academic success through the investigation of pre-college ability, freshman week, orientation courses, the use of the new type tests for admission and for the improvement of instruction in the freshman area. The use of quantitative measurement in the evaluation of teaching reveals a large number of significant studies. Careful quantitative diagnosis of the difficulties of maladjusted students are numerous and are in many cases used as a basis for remedial instruction.

The best single characterization of the extent of the experimental studies in higher education is afforded by the selected bibliography of six hundred titles. One may infer, therefore, that the college professor is becoming committed to the same scientific approach to the problems of instruction which he uses in his study of the problems of his own subject-matter field.

AGE AND EFFICIENCY

WE who are growing older in the profession of college teaching have an amiable feeling that as years and experiences accumulate the quality of our teaching proportionately improves, because of the increasing richness of our knowledge. It is psychologically natural that we should feel that this is the case, and we are fortified in this position by the insistence of the administrative officers that the senior members of the faculty should do some teaching in the freshman area.

This assumption, like all other assumptions, should be carefully examined by the use of objective measures of efficiency. This is obviously a difficult task to accomplish, and we have no known methods by which to secure complete and valid measures. The possibility that the assumption may not be well founded is brought to our attention in a recent study made by a committee of the Association of Land-

Grant Colleges and Universities and reported in the *Proceedings of the Forty-Second Annual Convention.*

This committee gave certain objective tests in freshman chemistry to 6,667 students in twenty-eight of the institutions belonging to the Association, at the end of the first year of college chemistry. When these tests had been scored and corrected for various factors, such as differences in the intelligence quotients of the students and the amount of chemistry that they learned in the high schools, some significant subordinate facts were revealed.

One of the most interesting conclusions drawn by the investigators bears upon the question which we have just raised. The students of teachers who had taught for less than eleven years made remarkedly higher scores than those who had taught for more than eleven years. The classes which were taught by instructors of more than twenty-five years of experience made the lowest grades of any of the group. The committee says: "In general, it will be noted that one's teaching efficiency during the first ten or twelve years is highest and, after that, there is a tendency for it to gradually decrease." It was found, also, that the students of doctors of philosophy showed no marked superiority over the students of those with master's degrees. It was found, also, that the achievement of students of full professors were noticeably lower than that of associate professors, assistant professors, and instructors. Furthermore, it was discovered that the students of instructors who carried a teaching-load of from fourteen to eighteen hours per week made scores noticeably superior to those of instructors who taught less than fourteen or more than eighteen hours.

From these findings no general conclusions concerning differences in the efficiency of teachers can be drawn. The specific objective test used in this study may not measure all the objectives that are sought in college teaching. Instructors who are inferior teachers of Freshmen may be unusually successful with upper-classmen, and facts which hold true for instruction in freshman chemistry may not be valid either in the more-advanced courses in chemistry or in other subjects. Certainly, more studies than this particular one need to be made before any general conclusions can be drawn.

The significant value of the study lies in the fact that it introduces the newer objective techniques of measuring efficiency and points to methods that need to be used in assaying our favorite assumptions. It is to be hoped that this pioneering study will be merely the first of many studies which will seek to throw light upon this assumption and others that we make in the field of higher education.

W. W. C.

REVIEWS

The Emergence of the Individual

THE ASCENT OF HUMANITY, *by Gerald Heard.* New York: Harcourt, Brace and Company, 1929. xiv+332 pp. $3.00.

Those active intellects which love hard problems ought to love this book. It presents a great many knotty problems. Unfortunately, one which presents itself too frequently is: What is the author trying to say? But there are other problems to challenge the thoughtful, some of which go to the very foundation of sociology. The style is attractive in spite of its obscurity. Its sonorous quality makes almost every sentence seem quotable.

The reader may gather some idea of the general drift of the author's argument from the chapter headings here mentioned: The Pre-Individual; The Proto-Individual; The Pioneer Individual; The Arrest of Individuality; The Upper Individuality; The Lower Individuality; The Enlargement of Individuality.

These titles, and the order of their arrangement, seem to indicate what the author means by the "rise of humanity." They suggest, at least, the development of a higher from a lower individuality, or the evolution of the psyche from a state wherein the soul of man was without form and void.

They emphasize clearly, therefore, a shift from the biological and economic to the psychological phases of evolution. As the idea of progress grows, it will be seen that progress is in man himself—in his psyche and not in his works. Throughout the book there is an insistence upon the emergence of the individual from the more or less inert social mass. The psyche struggles to disentangle itself from the network of mores. These have been woven around it by the exigencies of tribal survival. The outcome of the struggle for tribal survival is a rebirth of the soul.

Instead of looking upon the individual, or the psyche, as itself the product of the struggle for group survival, the author seems to look upon it as derived from some higher source. It has apparently been compelled to pass through the very earthly purgatory of biological evolution. It is emerging from that death-in-life into a higher realm where it may breathe the air of freedom and become a living soul.

The suggestions that progress is in man himself rather than in his works brings up many old controversies. It is by no means a novel idea, and it has always met with the same logical difficulties. How can there be a development of individuality apart from works? "Show me thy" individuality "without thy works" and "I will show thee my" individuality "by my works" will serve to indicate where the crux of the question lies. When Bronson Alcott and his group of Transcendentalists at Fruitlands adopted the motto "Being rather than doing" they merely delegated the "doing" to hard-working, devoted Mrs. Alcott. That is usually the result of the effort to escape from doing. Mr. Dooley decided that he had the judicial temperament because he hated work. Others have been moved to loaf and invite their souls, or cultivate their individuality, for the same reason. It is no compliment to the soul of Mary to assume that it could not have survived a certain amount of work. The fussiness about unimportant work, without regard to times and places, was the occasion of the rebuke to Martha.

The author's aphorism, "We attempt to move things less as our minds move more" (p. 263) is not only untrue to fact, it is bad psychology. Motionless contem-

plation is not an intense form of mental activity. There is no known method of measuring energy except in terms of the work it will do. How can one even detect the existence of mental activity except through the physical motion of vocal organs, sound waves, fingers and pens, brushes, mallets, and chisels, tools, or the rearrangement of matter in some form. If the claim is made that, in proportion as minds move, in that proportion are the indicative motions and the foot pounds of mechanical power reduced in number and magnitude, even that is untrue. The aeroplane is the product of one kind of mental activity. It takes mental activity even to learn the principles of navigation which makes possible the moving of rather bulky things over long distances. The mind of a Bowditch was probably as active as that of any Transcendentalist.

The book must be taken seriously, however, because it is an honest attempt to break away from biology and economics in the study of evolution. The reader may not be convinced that the attempt is successful, but he will at least be compelled to review his own theory of social evolution.

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College Architecture

COLLEGE ARCHITECTURE IN AMERICA: AND ITS PART IN THE DEVELOPMENT OF THE CAMPUS, *by Charles Z. Klauder and Herbert C. Wise.* New York: Charles Scribner's Sons, 1929. 301 pp. $5.00.

This book is an excellent compendium of existing college architecture; and because of its detailed and specific treatment of each special type of college building, it should be a useful guide to both administrators and architects. College architecture has shared with other branches of the art the improvements in technique, in matters like the size, placement, and arrangement of congruent rooms, which are the chief boast of modern American architecture. Unlike our industrial and commercial architecture, however, the outer form of the college is, with one or two exceptions which are recorded in *College Architecture in America*, timidly reminiscent of the past. When a college wishes to proclaim its harmony with the spirit of its age, it builds a skyscraper, despite the great initial expense and the large overhead of such structures, to say nothing of very grave doubts whether health, sociability, or meditation is promoted by the system of vertical communication enforced in these buildings. Actually, the skyscraper is probably no nearer to the proper form for the modern college than the Georgian or English perpendicular buildings which now divide the scene. What college architecture needs is the presence of contemporary architects, like Mr. Frank Lloyd Wright, who, without a bias for any particular form of layout or method of construction will think out freshly all the relations involved in the building of colleges, and who will symbolize the functions that are to be performed in an appropriate pattern on the campus and in the design of the building. There is a great drag, at present, in the direction of a tame and undistinguished traditional architecture, a drag which even the best college buildings, like Mr. Irving Pond's Michigan Union, or Mr. Clarence Stein's California Institute of Technology Buildings—to say nothing of Mr. Eliel Saarinen's non-collegiate Cranbrook School—have not been able altogether to throw off. While, therefore, this book is useful as an exhibition of things done and is a judicial survey of the best practice to date, it does not give a hint of the college architecture of tomorrow; and I, for one, should dislike to think that college architecture will remain in the decorous state of mummification it has now achieved. Anyone who fancies that the ponderous caricature of Georgian architecture on Oxford Street, Cambridge, is better than Seaver Hall is simply incapable of judging a work of architecture: yet this sort of taste is that which now parades as

an enlightened one, and which is capable of even demolishing or disguising the few non-traditional buildings, like gymnasiums or power houses, that have somehow been built here and there on our college campuses. We need, as a complement to the present book, a series of fresh studies on the college of tomorrow, done by men who have the courage and intelligence and fine feeling to recognize that college architecture cannot remain in a backwater, whilst in every other department a fresh integration is taking place.

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Education in Post-War Europe

THE NEW EDUCATION IN THE SOVIET REPUBLIC, *by Albert P. Pinkevitch.* New York: John Day Company, 1929. xiii+403 pp. $4.00.

THE NEW EDUCATION IN THE GERMAN REPUBLIC, *by Thomas Alexander and Beryl Parker.* New York: John Day Company, 1929. xxviii+387 pp. $4.00.

This is the authoritative presentation of the subject, to date. The author is president of the Second State University of Moscow. The book was translated under the auspices of the International Institute of Teachers College, Columbia University, by Nucia Perlmutter; while it is edited, with an introduction, by Professor George S. Counts, associate director of the Institute, who has spent many months in recent years in Soviet Russia, including a drive of ten thousand kilometers by Ford through European Russia in 1929. The editor says: "If anyone wishes to know the philosophy which dominates the efforts of the present government of Russia to mold the character of the coming generation in the Soviet Union, he can do no better than read the present volume."

The author presents in dramatic, yet substantial form the Russian point of view as to general theory of education, and the development, to date, of practices in pre-school education, in the organization of schools for children and youth, and in vocational and adult education. His realistic discussion of "the school and society" should be read by all American school administrators: "Existing society cannot be changed through the school. To make the school the embryo of a future social order is impossible, for the reason that the school cannot be independent of its environment."

But, for readers of this Journal, the most interesting chapters deal with the problems of "political enlightenment," and the "training of educational workers." The former has to do with "adult education" for intelligent membership in a social order, the latter with the adequate training of teachers—for such a social order. While the ultimate objectives of Soviet education may differ from those of America, the recognition of the social nature of education is common to both economies. Professor Pinkevitch is particularly keen in his treatment of John Dewey's educational philosophy. He thinks Dewey the profoundest philosopher of education in the world today.

The most important element in "the new education" in Germany, since the revolution, is the emergence of "activity." This is in the schools, at least in those schools that have come under the spell of the new spirit, and it is in almost all phases of the common life. The authors find it in the youth movement; in the provision of "hostels" in all parts of the land for "wanderers"; in the great increase in "school journeys"; in the spread of the movement for "country homes for city schools"; in the enormous development of sports and recreations; and in the new movements for creative arts and the creative spirit in nearly all directions.

All these activities are finding expression in various sorts of vanguard schools—in community schools, in pioneering forms of secondary schools at Hamburg and elsewhere, in "folk colleges" for adults—and in many other ways.

Are these new movements, is this creative

spirit a permanent addition to the program of German education? The answer will be found in the preparation of new types of teachers and in the new philosophy of education. The authors definitely say: "The new movements depend upon whether teachers can be found who will understand the new spirit, who will accept it as of the new day and as of their own wills, and who will play the game of 'creative activity' without falling back into the old ways." The problem is profound. The answer will not be assured until the generation that made the war is gone, with the most irreconcilable of its leaders.

Meanwhile, for America, the problems and hopes and conclusions set forth in the chapters on "The New Teacher" and "A Philosophy of Education," and in the "Conclusion" should prove stimulating, critically convincing, and prophetic.

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The Ladies

WOMEN IN THE MODERN WORLD, *edited by Viva B. Boothe.* 1929. viii+396 pp. (Annals of the American Academy of Political and Social Science, Vol. CXLIII, No. 232)

The name of this series of interesting articles is perhaps too comprehensive, since the subject-matter is limited to women in the United States in the first quarter of the twentieth century. There is no reference, for example, to the post-bellum status of women in republican Germany, in the new China, in Turkey under the Ghazi, or in Soviet Russia. And, indeed, certain significant groups in the United States of today are conspicuous by their absence. There is no discussion of our less reputable sisters, the prostitute and the woman offender. They can and perhaps should be dealt with rather under some discussion of judicial reorganization including a reform of the police, for nothing more radically affects the conduct of courts and police staffs than the requirement that equal treatment be meted out to men and women especially in all cases involving sex offenses. The women on the firing line of reforms, too, demanding new standards that make possible the intelligent performance of women's marital duties, and the exercise of the maternal function of conducting the young through the period of adolescence into adult life, that is, the "voluntary parenthood" and the "sex education" effort are likewise omitted.

The discussions cover, however, with admirable thoroughness certain subjects which call for careful deliberation on the part of educated and public-spirited women and men, for the status of women has a great interest for men, and three interesting men find their places in the list of authors, namely, Benjamin Andrews, of Teachers College; Ernest Groves, of the University of North Carolina; and David Snedden, likewise of Teachers College.

It is, of course, impossible to summarize and comment on the materials in these articles. They deal with woman in the home, with her contribution in services, with the nature of her function under modern conditions when she directs consumption instead of producing the variety of goods from which the family received its satisfactions in the earlier day; with the woman in industry, the clerical positions and the older professions, for the new profession opening before women in social work, and especially perhaps in public-social service is hardly mentioned. The impression made is of certain undertakings almost completed. The demolition of the old legal, educational, and political restraints is almost completed though Miss Smith (p. 255) shows that some are still to be removed in the matter of the wife's acting capacity. Women are almost free to choose, and if the choice were made on the basis of reason this volume would be of great service to one about to make a choice. The right on the part of every woman to enjoy the satisfactions of family life and to contribute to the family income through earnings, preferably, if married,

from a part-time job are set out. The evils of a domesticity which excludes outside employment are graphically shown (p. 302).

There is a strange and striking absence of the ardor of reform. And Mrs. Howes' proposals in adjustment while they emphasize adjustment in family organization do not exclude a reorganization of industry that would treat both industrial and governmental organization as instrumentalities in free social relationship. One need not accept Mrs. Howes' interpretation of the earlier efforts at emancipation to appreciate her plea that reorganization be attempted from both sides, and that with shorter work days possible under modern industrial processes, when probably intelligent social control could secure with a six-hour day enough goods for a reasonable sharing by all in the satisfactions of life, the application of co-operative principles to domestic organization has great value for large numbers of women.

Miss Boothe certainly has made an admirable case for a restatement of the problem at this time, has secured a very valuable collection of recent data and recent views, and has made an important contribution to sound thinking on the subject.

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In the Lay Magazines

"A University Based on a New Idea," by Myron M. Stearns, *World's Work*, March, 1930.

The author of this article, who lives in Connecticut, tells why he actively sought to influence his son to go to the University of Cincinnati. The development of the co-operative plan at Cincinnati is largely the work of one man. Herman Schneider conceived the idea before joining the faculty at Cincinnati. In 1906 he persuaded the University to try out his plan in the College of Engineering. At first the new course paralleled the conventional course, but the demand for the old-line course continued to fall off until it was dropped altogether in 1920. Last year Dean Herman Schneider's work was recognized by elevating him to the presidency of the University. The co-operative system is to be extended as rapidly as possible to other departments of the University.

"Why Is the Law?" by Gerald W. Johnson, *Century Magazine*, Winter, 1930.

At Johns Hopkins University an Institute of Law was set up in 1928. Work in this Institute will not qualify a man to practice law, but students entering the Institute are assumed to be already trained in law. The work of the Institute consists of a scientific investigation into the principles underlying law-making and the operation of laws. The Institute hopes to develop research techniques and train research workers in the field of law. Some of the work done at the Institute may be counted toward a Ph.D. degree.

"Discipline, What Cranky Teachers Think of It," by "One of Them," *Century Magazine*, Winter, 1930.

Discipline is lax from the kindergarten to the graduate school. It is essential to the future stability of America that our schools provide common-sense disciplinary training. Even if "formal" discipline is in disrepute, there is no evidence as yet against the principle of "moral discipline."

"Educational Leadership in America," by Alexander Meiklejohn, *Harper's Magazine*, March, 1930.

America is compared to the rich man's household in which the son is taught by a tutor. The tutor is the educational authority and should know what education is and how to bring education to the boy. The father has the welfare of his boy at heart. He wishes him to get a training which he himself was not able to get and so he hires a tutor. Now, where shall the direction come from? The teacher is the authority in education, but the father wields

the greater power because he pays the bill. Both have the welfare of the boy at heart, but there is conflict and misunderstanding as to how to attain the end desired.

Material success claims the right to make its own standards and to make education its obedient servant, teaching those things which harmonize with present-day society's practical achievements. The most fundamental issue underlying all educational problems is "whether or not our education is to have within itself any genuine leadership whatever." Education is concerned with the creating of an inner life. If material success is to dominate educational goals and methods, the outlook is far from bright.

"The Profession of a Teacher," by Beatrice Mulliner, *Nineteenth Century*, February, 1930.

In the light of recent criticisms of teachers in England, the author, who is headmistress of Sherborne School for Girls, discusses some points which a good professional training for a teacher should include. The first prerequisite is a command of good English, together with a pleasing, audible voice. Another essential is that teachers have the power to arouse interest in the subjects they teach. But the greatest need is for an increasing number of teachers who look upon the profession as a vocation.

"Hamstringing Our Teachers," by Earl W. Anderson, *Atlantic Monthly*, March, 1930.

"Fettering of teachers tends to dehumanize them and to force from teaching many of the most wide-awake, stimulating, and wholesome men and women in the profession." In this interesting article, based upon a wide study of teachers' contracts and state laws, the author discusses, with many concrete illustrations, numerous requirements and restrictions under which teachers must labor. These restrictions are often petty, irritating, or even insulting. Teachers, however, are not always without blame. They are at times belligerent nonconformists who invite retaliatory measures on the part of the communities.

The situation is by no means hopeless. With the exception of the prejudice against married teachers, tolerance is increasing.

"What'll I Do Now?" by Rita S. Halle, *McCall's Magazine*, April, 1930.

The demand for college graduates is increasing. Many companies are sending their representatives to the colleges to look over the crop of graduates and to compete for the services of those who appeal to them. Particular stress is placed upon the fact that most industries are not interested in students who have only a partial college education, even if they have as much as two or three years. Unless they have graduated, they are not considered.

"Clipping Educational Coupons," by Paul D. Moody, *Plain Talk*, March, 1930.

Impatience, self-deception, superficiality, and intense partisanship are, according to President Moody, of Middlebury College, the serious weaknesses of American education. In this well-written article the author discusses all four of these characteristics, observing that they are but reflections of national characteristics.

In particular he condemns the course credit system. He compares it to saving tobacco coupons until one has enough of them to exchange for a premium. This premium, he observes, is in no way related to the tobacco which was the real object of the original purchase, nor is the diploma very closely related to the scattered subjects which the student has taken in order to collect sufficient credits to purchase it.

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